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Unbundling Property in Water

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UNBUNDLING PROPERTY IN WATER

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ABSTRACT

The United Nations Intergovernmental Panel on Climate Change predicts that, in the foreseeable future, climate change will exacerbate water problems worldwide. In the United States, we are likely to see more severe flooding, more frequent droughts, and a rush to secure legal rights to water supplies. Sustainable management of water resources for present and future generations will become all the more imperative as we face increasing pressure on limited supplies.

The quest for sustainable management has stimulated a movement for greater recognition of private property rights to attain efficient use and allocation of water. The World Bank and the International Monetary Fund have encouraged nations in the developing world to conform to a market paradigm by privatizing their water supplies. Affected communities are often less than enthusiastic. Throughout the world, attempts to privatize water resources have triggered a "morality play of rights versus markets, human need versus corporate greed." The controversy, however, is not limited to developing countries. One of the most divisive issues in contemporary natural resources law in the United States is whether interests in water are property. Absent legally recognized property rights, water markets are unlikely to thrive. According to the Restatement of Property, the term "property" describes "legal relations between persons with respect to a thing." Of course, not all economic relationships give rise to property rights. Judicial treatment of water is all over the map. The Court of Federal Claims awarded California irrigators millions of dollars as compensation for a regulatory taking of their water rights when flows were curtailed to protect endangered salmon, but a different panel of the same court subsequently took that opinion to task for failing to consider whether interests in water are property. Other federal and state courts have reached contradictory results as well.

To unbundle the concept of property in water, this Article uses a web of interests as a strong yet flexible metaphor for property, complemented by a patterning definition representing elemental strands of the web. If the interest in question is not an irrevocable interest in the exclusive possession and use of a discrete, marketable asset, it is not property for purposes of regulatory takings under the Fifth Amendment. Viewed through this lens, interests in water in most jurisdictions are not takings property, although they may be a form of property for purposes of due process or common law claims.

INTRODUCTION

Water is the issue of the decade and, in all likelihood, the century. Governing bodies around the world are grappling with significant water issues. The United Nations General Assembly has focused the world's attention on the imperative of ensuring access to water for drinking and sanitation by proclaiming 2005 to 2015 as the International Decade for Action.[1] Fresh water supply, which is indispensable for both human well-being and environmental integrity, is on par with climate change as the two physical limitations most likely to change the way we live.[2]

As the quest for sustainable management of water resources becomes more urgent, a movement championing greater recognition of private property rights to attain efficient use and allocation of water is gaining momentum. The World Bank and the International Monetary Fund have encouraged nations in the developing world to conform to a market paradigm by privatizing their water supplies.[3] Paradoxically, at the same time, members of the international community have identified water as a basic human right, potentially complicating the drive toward privatization.[4] It should come as no surprise, then, that attempts to privatize water resources have triggered a "morality play of rights versus markets, human need versus corporate greed."[5]

The privatization controversy is not limited to the developing world. One of the most divisive issues in contemporary natural resources law in the United States is whether interests in water are legally recognized as property. In the West, surface water is typically viewed as a form of private property, while in the East it is not.[6] In either case, the law is surprisingly unsettled; over two centuries of American caselaw have yielded no

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1. *See* G.A. Res. 58/217, ¶ 1, U.N. Doc. A/RES/58/217 (Feb. 9 2004), *available at* http://www.unesco.org/water/water_celebrations/decades/water_for_life.pdf. The declaration announces the ambitious goal of doubling the proportion of people able to obtain safe drinking water by 2015. *See id.* ¶ 2.

2. *See* INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2007: THE PHYSICAL SCIENCE BASIS: SUMMARY FOR POLICYMAKERS 5, 7 (2007) (concluding that drought is likely to become more widespread while tropical storms become more intense), *available at* http://www.aaas.org/news/press_room/climate_change/media/4th_spm2feb07.pdf.

3. VANDANA SHIVA, WATER WARS: PRIVATIZATION, POLLUTION AND PROFIT 92 (2002); Timothy O'Neill, Note, *Water and Freedom: The Privatization of Water and Its Implications for Democracy and Human Rights in the Developing World*, 17 COLO. J. INT'L ENVTL. L. & POL'Y 357, 358–59 (2006).

4. *See* Press Release, Kofi Annan, Secretary-General, United Nations, Access to Safe Water Fundamental Human Need, Basic Human Right, Says Secretary-General in Message on World Water Day, U.N. Doc. SG/SM/7738 (Mar. 13, 2001), *available at* http://www.unis.unvienna.org/unis/pressrels/2001/sgsm7738.html.

5. James Salzman, *Thirst: A Short History of Drinking Water*, 18 YALE J.L. & HUMAN. 94, 96 (Supp. 2006).

6. *See* David B. Schorr, *Appropriation as Agrarianism: Distributive Justice in the Creation of Property Rights*, 32 ECOLOGY L.Q. 3, 7–8 (2005).

consistent answers. Divergent judicial views are illustrated by two recent cases. In 2005, the Nebraska Supreme Court held that surface water is not property, rejecting common law conversion claims against groundwater pumpers,[7] while just a few years earlier the Court of Federal Claims, applying California law, concluded just the opposite when supplies were curtailed to protect endangered species.[8] Neither court provided a principled analysis in support of its conclusion.

Why is the classification of property, or for that matter *any* legal interest, necessary? Classification is an important pathway for human understanding and organizing new information. It also serves rule of law imperatives. Well-ordered legal systems should be based on normative principles that ensure against arbitrary power and guide conduct in a manner that is clear and consistent as well as fair. Absent clarity and competency, expectations are frustrated and public and private affairs become more difficult to accomplish.

More specifically, classifying a thing as property has tremendous legal consequences under the Takings and Due Process Clauses of the U.S. Constitution. The Takings Clause forbids governments from taking private property without just compensation.[9] Due process ensures that no person is deprived of property arbitrarily or without procedural safeguards.[10] In either case, the party claiming injury must, as a threshold matter, have some sort of property at stake.

Beyond constitutional implications, additional legal consequences flow from classification as property. It is determinative of issues ranging from the ability to prevent trespass,[11] conversion,[12] or nuisance under the common law,[13] to mortgage the thing in question,[14] to freely convey it or split it between present and future interests,[15] to receive special treatment under federal or state tax laws,[16] and to impose or avoid trade constraints.[17]

Treating a natural resource like water as property also has significant implications for conservation. The recognition of secure private property rights can encourage maximum utilization of resources and foster stewardship and wise investment of labor and capital.[18] By the same token, the

7. Spear T Ranch, Inc. v. Knaub, 691 N.W.2d 116, 127, 136 (Neb. 2005).
8. Tulare Lake Basin Water Storage Dist. v. United States, 49 Fed. Cl. 313, 324 (2001).
9. U.S. CONST. amend. V.
10. *See id.*; *id.* amend. XIV, § 1.
11. 63C AM. JUR. 2D *Property* § 27 (1997).
12. *See* 18 AM. JUR. 2D *Conversion* § 2 (2004).
13. *See* 58 AM. JUR. 2D *Nuisances* § 1 (2002).
14. *See* RESTATEMENT (THIRD) OF PROP.: MORTGAGES § 1.1 (1997).
15. *See* 63C AM. JUR. 2D *Property* § 26 (1997).
16. *See* James A. Fellows, *Tax Issues*, 30 REAL ESTATE L.J. 58, 61 n.6 (2001) (noting that rental property and commercial buildings get special treatment under tax law).
17. *See* 1 MELVIN F. JAGER, TRADE SECRETS LAW § 4.3 (2007).
18. Bruce Yandle & Andrew P. Morriss, *The Technologies of Property Rights: Choice Among Alternative Solutions to Tragedies of the Commons*, 28 ECOLOGY L.Q. 123, 130 (2001)

absence of legally protected interests in property can result in a "tragedy of the commons," where a public or commonly held resource is plundered as each selfish—yet economically rational—actor takes steps to promote self-interest with little regard for externalities that deplete the resource.[19] On the other hand, jurisdictions that claim to recognize property rights in water, particularly those in the western United States, have not necessarily encouraged efficiency or conservation but rather have created incentives for exploitation.[20]

Water is a uniquely essential resource with uniquely public attributes, unlike real estate, currency, jewelry, and many other things that are treated as property. Its uniqueness justifies an in-depth consideration of whether it may be treated as a private commodity, subject to profit-motivated management. This Article analyzes the nature of property in water as a creature of positive law. To do so, it delves into the nature of property as a normative legal construct and the nature of water as a thing potentially subject to that construct.

Interests in water, like other tough cases at the margins of property or "quasi-property," illustrate a broadly applicable point. Rather than being merely relational, property rights attach to persons only with respect to their relationship to some discrete thing, be it tangible or intangible, corporeal or incorporeal.[21] The inimitable aspect of property law, as opposed to contract, tort, or public law, is its concern with things. A rational conception of property must recognize both the human relationships with a thing and the nature of the thing itself. An in-depth assessment of the nature of interests in water undercuts the commonly accepted contemporary view that property is more about legal relations among people than about the thing itself.

Property gives a person, the owner of a thing, legal rights to control that thing and to exclude all the world—not just specified individuals but a large class of others—from possession or use of that thing.[22] People tend to feel strong attachments to things known as property. Land and certain types of personal property form important components of a person's identity and self-actualization.[23] But other things cannot be treated as property at all in American law. Examples of things that are themselves non-property but are elemental to important, recognizable property interests

19. Garrett Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243, 1244 (1968).

20. *See* Eric T. Freyfogle, *Water Rights and the Common Wealth*, 26 ENVTL. L. 27, 33-34, 50 (1996) [hereinafter Freyfogle, *Common Wealth*]; *see also* Eric T. Freyfogle, *The Tragedy of Fragmentation*, 36 VAL. U. L. REV. 307, 318-22 (2002) (discussing the harm private owners sometimes do to their property).

21. *See* RESTATEMENT (FIRST) OF PROPERTY: INTRODUCTION & FREEHOLD INTERESTS, ch.1, introductory note, at 3 (1936).

22. *See* Thomas W. Merrill & Henry E. Smith, *What Happened to Property in Law and Economics?*, 111 YALE L.J. 357, 359 (2001).

23. *See* MARGARET JANE RADIN, REINTERPRETING PROPERTY 191-201 (1993).

include human body parts (non-property), essential to medical research and patents (property); trust (non-property), a key component of business goodwill (property); love (non-property), often symbolized through wedding rings and love songs (property); personality and appearance (non-property), both elemental to celebrity rights to publicity (property); and imagination (non-property), necessary for inventions, books, art, and other forms of intellectual property.[24]

Instead of perpetuating the commonly employed "bundle of rights" metaphor to describe property, we seek an organic, two-dimensional symbol that better reflects property-based relationships with things. The bundle metaphor does not leave room for the thing; instead, it is a one-dimensional depiction of various interests typically associated with property, with no prioritization or acknowledgement of attributes that must invariably be present for a thing to be considered property. The bundle metaphor fails to assess either the character of the thing in question or the nature of human relationships with it, and it also overlooks the importance of that thing ω related human and ecological communities.

This ıs not to say that there is no place for metaphor in property law. The use of metaphor, a basic building block of human cognition, complements rule of law objectives by infusing legal classifications with the wisdom of commonly held experiences through visual imagery. Building on a concept crafted by Tony Arnold, we envision property as a "web of interests," where the thing considered property is at the center and relationships with the thing— incidents of private ownership as well as public and communal rights—form the internal strands of the web and the surrounding webframe.[25] Due to its remarkable strength and flexibility, a spider web is considered the "Holy Grail" of biomaterials, with tremendous potential for design innovation.[26] Its attributes make it equally attractive for design innovation in property law. Although Professor Arnold proposed the web metaphor as a means of analyzing issues related to property,[27] we take it one step further, using it to determine whether property exists in the first place. The web can only exist if its elemental strands are intact. The same is true for property, which only exists if the elemental incidents of property with respect to the thing in question are intact.

The web metaphor is intended to identify and describe all sorts of property. Its application to water illustrates its potential effectiveness as a heuristic tool. The outermost circumference of the web, or the webframe, represents societal norms attached to the thing in question. As applied to

24. Craig Anthony (Tony) Arnold, *The Reconstitution of Property: Property as a Web of Interests*, 26 HARV. ENVTL. L. REV. 281, 291–95 (2002).

25. *Id.* at 334.

26. Sean Kennedy, *Biomimicry/Bimimetics: General Principles and Practical Examples*, SCI. CREATIVE Q., Aug. 2004, http://scq.ubc.ca/?p=321.

27. Arnold, *supra* note 24, at 281–84, 332–64.

water rights, the webframe reflects the public trust doctrine, which safeguards public access for critical purposes such as subsistence use.[28] Governmental rights and responsibilities as the trustee of the res (the water, stream beds, and shorelines) are found here at the outer parameter of the web. The concentric circles radiating from the center of the web represent appropriators of the water, riparian landowners, and other people who use the water for subsistence, recreation, or navigation; the fisheries and other water-dependent species; and, for interstate waterbodies, upstream and downstream states. The spoke-like strands that hold the web together represent the elemental incidents of property. Only if these incidents are present can the private interest in water be considered property; otherwise, the web falls apart.

Elemental strands, or incidents, can be distilled from the laundry list of incidents identified by A.M. Honoré to certain key attributes: rights of exclusive possession or control and rights of alienation.[29] These elemental strands can be calibrated with greater precision, in a manner that focuses attention on the thing in question, through Thomas Merrill's patterning definitions for identification of constitutional property.[30] Like Honoré's incidents, Merrill describes a property right as an irrevocable, vested right to exclude others, but adds that the right must relate to a discrete, marketable asset to be considered full constitutional "takings property."[31] Thus, the thing at the center of the web must be a discrete asset exchanged by economic actors on a fairly regular basis, and the claimant must identify a durable, non-ephemeral, transferable right to exclude others from possessing or controlling it.

These elements dovetail with the Supreme Court's regulatory takings jurisprudence. The requirement for a durable interest in a discrete asset requires a distinct investment-backed expectation in the exclusive possession, use, and conveyance of the thing.[32] Exclusivity in the possession and use of a discrete asset corresponds to whether a competing interest or regulatory restriction is inherent in "background principles" of property law.[33] When the public interest in the thing is strong enough for a government regulator to restrict its use, these elements must be present to support a regulatory takings claim.[34]

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28. *See* A. DAN TARLOCK, LAW OF WATER RIGHTS AND RESOURCES § 8:18 (2005).
29. A.M. Honoré, *Ownership*, *in* OXFORD ESSAYS IN JURISPRUDENCE 107, 112-24 (A. G. Guest ed., 1961).
30. *See* Thomas W. Merrill, *The Landscape of Constitutional Property*, 86 VA. L. REV. 885, 952-60, 970-81 (2000).
31. *See id.* at 969, 974.
32. See Penn Cent. Transp. Co. v. City of New York, 438 U.S. 104, 124 (1978).
33. *See* Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1029-32 (1992).
34. *See Penn Cent. Transp. Co.*, 438 U.S. at 124-25.

If exclusivity in the use of something of value is found, but the interest in the thing in question is ephemeral, revocable, or non-marketable, one might have a limited form of property for purposes of due process or common law claims, but not a full property right for purposes of regulatory takings law.[35] In other words, different patterns of full ownership, limited ownership, or non-ownership may emerge with respect to the same type of thing in different contexts.

Water is a case in point. Under the doctrine of riparian reasonable use, widely followed in the eastern United States, each user's right is correlative and dependent on the needs and reasonable uses of others.[36] Nonconstitutional sources of law do not treat water as a discrete, marketable asset or allow riparian landowners an irrevocable right to exclude others from using it.[37] In the western United States, however, the notion of water as property is evident in both common perception and in legal jurisprudence.[38] Appropriators are authorized to put water to beneficial use, which is considered the basis, measure, and limit of the right.[39] If water is put to beneficial use, the user develops a prior appropriation right, which is typically reflected in a state-issued permit or judicial decree.[40] In most western jurisdictions, an appropriator has a durable right to put a specific quantity of water to an exclusive beneficial use, but the appropriator may not merely possess the water (it must be used or it is forfeited) and may not freely convey it.[41] As a result, the appropriator may have a limited form of property for purposes of due process or common law claims, but not a full property right for purposes of regulatory takings law.

We begin this Article with an assessment of the psychological and social need to create clearly defined legal classifications, particularly when it comes to property. Part II delves into the physical nature of water and the legal nature of water rights in prior appropriation jurisdictions. The web metaphor and patterning definition for identifying property are introduced in Part III. Part IV tests this analytical framework by applying it to tangible and intangible things that have proven most difficult to classify: information, body parts, great works of art, and air. Finally, in Part V, we return to water. We conclude that limited property rights in water exist under the prior appropriation doctrine, but these are not full property rights because the appropriator has no reasonable expectation to possess or

35. *See infra* Subart III.B.1.

36. *See* TARLOCK, *supra* note 28, § 3:60 (2007).

37. *See id.* § 3:10 (2005).

38. *See* Ronald A. Christaldi, *Sharing the Cup: A Proposal for the Allocation of Florida's Water Resources*, 23 FLA. ST. U. L. REV. 1063, 1069 (1996) (noting that in the western states water is treated as property).

39. Nicole L. Johnson, Comment, *Property Without Possession*, 24 YALE J. ON REG. 205, 223 (2007).

40. *See id.* at 221–23.

41. *See id.* at 228.

convey the water as a discrete, marketable asset. Placing water in context, at the center of the web of interests, helps explain this result. The public interest in water, depicted by the webframe, is so compelling that, by precluding non-use and imposing trade constraints, public access is ensured and private rights are correspondingly limited. The absence of those elemental strands means that appropriators do not have full takings property, but they may have due process or common law property.

I. CLASSIFICATION, COGNITION, AND THE RULE OF LAW

"Legal thought is, in essence, the process of categorization."[42]

Classification is an elemental tool in basic human cognition as well as in law. The function of classification, or grouping concepts or things with similar concepts or things, has been studied extensively by psychologists and legal realists alike. Classification as property has special significance to society and to proprietors, and special consequences under constitutional law.

A. Classification and Cognition in Psychology and Law

Cognitive psychologists describe classification as an important pathway for learning, processing, and organizing new information.[43] Classifying things and placing them in categories is a commonsense means of identification, simplification, and prediction—if one thing within a category behaves a certain way, then other related things might, too. In the early twentieth century, classification became a discrete line of inquiry among legal scholars seeking coherence and consistency through the trilogy of predictability, reliability, and clarity. Roscoe Pound explained the exercise of classification as "a shaping and developing of traditional systematic conceptions and traditional systematic categories in order to organize the body of legal precepts so that they may be: (1) [s]tated effectively with a minimum of repetition, overlapping, and potential conflict, (2) administered effectively, (3) taught effectively, and (4) developed effectively for new situations."[44]

Of course, coherence and consistency do not always go hand in hand. At times, inconsistency can foster greater degrees of coherence by enhanc-

42. Kenneth J. Vandevelde, *The New Property of the Nineteenth Century: The Development of the Modern Concept of Property*, 29 BUFF. L. REV. 325, 327 (1980).

43. *See* MARK H. ASHCRAFT, COGNITION 285 (4th ed. 2006).

44. Roscoe Pound, Comment, *Classification of Law*, 37 HARV. L. REV. 933, 944 (1924). Pound found classification useful for problem-solving but expressed doubts about the "extravagant expectations as to what may be accomplished through classification of law." *Id.* at 938–39.

ing other legitimate objectives, such as flexibility, responsiveness, and innovation, and by serving as a dynamic laboratory for the development and protection of individual and communal rights.[45] But inconsistency often comes with a high price, yielding both substantive errors and perceptions, at least, of procedural unfairness.[46] It also spawns inefficiencies due to the lack of decisionmaking coherence, specifically, predictability, reliability, and clarity.[47]

Classification serves important rule of law precepts by providing both structure (consistency) and coherence.[48] The rule of law is founded on the adoption of consistent rules capable of guiding both individual conduct and non-arbitrary dispute resolution.[49] It also entails a conceptual link between law and accepted principles of morality capable of commanding the assent of those bound by the law.[50]

The identification of relatively clear analytical parameters through categorization allows legal rights to be determined by law rather than by authoritarian decisionmakers wielding unbridled discretion.[51] The resulting predictability, reliability, and clarity breed coherence as well as consistency.[52] This promotes confidence in the rule of law and increases the efficiency and accuracy of decisionmaking mechanisms, all the while protecting justified expectations.[53] The use of metaphor, a basic building block of cognition and problem-solving, complements rule of law objectives by infusing rules and legal classifications with the wisdom of commonly held experiences through visual imagery.[54]

B. Classification and Property

Justice Stewart once described property as a "broad and majestic term[]," among the "[g]reat [constitutional] concepts . . . purposely left to

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45. Susan D. Franck, *The Nature And Enforcement of Investor Rights Under Investment Treaties: Do Investment Treaties Have a Bright Future*, 12 U.C. DAVIS J. INT'L L. & POL'Y 47, 68 (2005).

46. *See id.* at 64–66.

47. *Id.* at 63; *see also* Susan D. Franck, *The Legitimacy Crisis in Investment Treaty Arbitration: Privatizing Public International Law Through Inconsistent Decisions*, 73 FORDHAM L. REV. 1521, 1584 (2005) (discussing need for consistency in treaty arbitration).

48. *See* Jay M. Feinman, *The Jurisprudence of Classification*, 41 STAN. L. REV. 661, 676 (1989).

49. *See* Oona A. Hathaway, *The Cost of Commitment*, 55 STAN. L. REV. 1821, 1837 n.52 (2003) (citing THE CAMBRIDGE DICTIONARY OF PHILOSOPHY 699 (Robert Audi gen. ed., 1995)). Professor Franck notes that the rule of law also requires accessible and fairly structured tribunals. Franck, *supra* note 45, at 59–69, 79–80.

50. Richard H. Fallon, Jr., *"The Rule of Law" as a Concept in Constitutional Discourse*, 97 COLUM. L. REV. 1, 22–23 & n.108 (1997).

51. *See id.* at 23.

52. *See* Franck, *supra* note 45, at 65–66.

53. *Id.* at 63 nn.62–63 (citing Deborah J. La Fetra, *Kick It up a Notch: First Amendment Protection for Commercial Speech*, 54 CASE W. RES. L. REV. 1205, 1207–08, 1216 n.72 (2004); Joseph R. Grodin, *Are Rules Really Better Than Standards?*, 45 HASTINGS L.J. 569, 570 (1994)).

54. *See infra* Subpart III.C.

gather meaning from experience."[55] Why, then, this insistence on defining and classifying property rights?

The rule of law is particularly important when it comes to property. Absent clear parameters to promote coherence and consistency, the concept of property loses its usefulness for advancing either social or economic objectives.[56] Decisionmakers can protect public and private interests in things subject to property rules only if they articulate a substantive, coherent definition of property.[57] In the modern, global economy, the rule of law is vital. Without it, those governed by the competing standards of different jurisdictions will be less willing and less able to adhere to the rules.[58]

Thomas Merrill and Henry Smith stress the *numerus clausus* (closed number) rule as a design principle for property.[59] This principle demands that property rights comport with a limited menu of standard forms.[60] Standardization reduces information costs imposed on third parties; conversely, the creation of idiosyncratic property rights increases costs and stifles economic and social transactions.[61]

Thomas Grey, on the other hand, argues that property rights have become increasingly unimportant in liberal capitalist theory, in large part due to the shift in legal thinking to the "bundle of rights" concept of property as any combination of relationships among people.[62] To the contrary, far from losing its usefulness as a legal construct, property is still a discrete and important functional category within the law. In American society, property is perceived as something quite different than other legal rights, and categorization as property has important legal consequences under the U.S. Constitution as well as federal and state statutes and the common law.[63]

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55. Bd. of Regents v. Roth, 408 U.S. 564, 571 (1972) (quoting Nat'l Mut. Ins. Co. v. Tidewater Transfer Co., 337 U.S. 582, 646 (1949) (Frankfurter, J., dissenting)).

56. *See* Jeanne L. Schroeder, *Chix Nix Bundle-O-Stix: A Feminist Critique of the Disaggregation of Property*, 93 MICH. L. REV. 239, 256 (1995).

57. Fallon, *supra* note 50, at 22 (citing RICHARD A. EPSTEIN, TAKINGS: PRIVATE PROPERTY AND THE POWER OF EMINENT DOMAIN 304–05 (1985)).

58. Franck, *supra* note 45, at 66 & n.76 (citing, inter alia, Antonin Scalia, *The Rule of Law as a Law of Rules*, 56 U. CHI. L. REV. 1175, 1179 (1989)) ("Rudimentary justice requires that those subject to the law must have the means of knowing what it prescribes. . . . There are times when even a bad rule is better than no rule at all.").

59. Thomas W. Merrill & Henry E. Smith, *Optimal Standardization in the Law of Property: The* Numerus Clausus *Principle*, 110 YALE L.J. 1, 3–4 (2000)

60. *Id.*; *see also* Henry E. Smith, *The Language of Property: Form, Context, and Audience*, 55 STAN. L. REV. 1105, 1107 n.4 (2003) (assessing the costs and benefits of standardization from the communicative perspective of property).

61. *See* Merrill & Smith, *supra* note 59, at 9; *see also* Abraham Bell & Gideon Parchomovsky, *A Theory of Property*, 90 CORNELL L. REV. 531, 549–50 (2005) (offering affirmation of the Merrill/Smith approach).

62. Thomas C. Grey, *The Disintegration of Property*, *in* MODERN UNDERSTANDINGS OF LIBERTY AND PROPERTY 291, 291–93 (Richard A. Epstein ed., 2000).

63. *See supra* notes 9–17 and accompanying text.

First and perhaps foremost, parties asserting an interest under the Takings Clause of the U.S. Constitution must demonstrate that their interest is property to avoid dismissal.[64] Persons seeking protection for economic interests under the Due Process Clauses of the Fifth and Fourteenth Amendments must also establish they have property at stake.[65]

In addition, statutory rights and responsibilities result when a thing is classified as property.[66] Can the thing be mortgaged? Can it be freely conveyed or split between present and future interests? How is it treated under laws governing inheritance? Is the depletion or conveyance of the thing, or a commitment to conserve it, entitled to special treatment under federal or state tax laws (like amortization or like-kind exchanges)?[67] If trade restraints are imposed on the thing, can an expropriation claim be asserted under international investment commitments?[68]

As for the common law, claims for conversion, trespass, and nuisance may only be asserted if a property interest is at stake.[69] Absent property, parties are left with negligence, contract, or other types of claims, some of which may be far more difficult to prove. Negligence, for example, requires breach of a duty and proximate cause, whereas conversion and trespass do not.[70] Also, in common law disputes between parties, the choice between property rules and tort or contract rules has important consequences in terms of remedies. Property rules are often enforced through equitable remedies like injunctions, in contrast with tort or contractual

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64. Merrill, *supra* note 30, at 888; *see* Bowen v. Pub. Agencies Opposed to Soc. Sec. Entrapment, 477 U.S. 41, 55–56 (1986) (finding that the interest in question was not property and therefore did not provide the basis for a takings claim).

65. Bd. of Regents v. Roth, 408 U.S. 564, 577 (1972); *see* Coll. Sav. Bank v. Fla. Prepaid Postsecondary Educ. Expense Bd., 527 U.S. 666, 672–75 (1999) (holding that a business's interest in a statutory cause of action is not "property" under the Due Process Clause).

66. *See supra* notes 9–17 and accompanying text.

67. *See* Wiechens v. United States, 228 F. Supp. 2d 1080, 1085 (D. Ariz. 2002) (recognizing a right to use water as a property right under Arizona law but holding that the exchange of that right for land was not a like-kind exchange under Internal Revenue Code § 1031 because rights limited by "priority, quantity, and duration . . . [are] not sufficiently similar to the fee simple interest"); United States v. Shurbet, 347 F.2d 103, 108–09 (5th Cir. 1965) (allowing amortization of groundwater depletion).

68. *See, e.g.*, North American Free Trade Agreement, U.S.-Can.-Mex., Dec. 17, 1992, 32 I.L.M. 296 (1993); *Texas Farmers File Formal Notice of NAFTA Violation—Seek Damages from Mexico for Failure to Deliver Treaty Water* [Sept. 2004], W. Water L. & Pol'y Rep. (Argent Commc'n Group) 325–26 (Oct. 2004), *available at* http://www.argentco.com/htm/f20041001.535005.htm (describing $500 million claim by Texas irrigation district against Mexico under NAFTA Chapter 11 for failure to deliver water); Bayview Irrigation Dist. v. United Mexican States, ICSID No. ARB(AF)/05/01 (NAFTA Arbitral Trib. June 19, 2007), *available at* http://www.economia.gob.mx/work/snci/negociaciones/Controversias/Casos_Mexico/Marzulla/documentos_basicos/bayview_ing.pdf (dismissing claims for lack of jurisdiction).

69. *See* RESTATEMENT (SECOND) OF TORTS §§ 822 (1979) (nuisance); *id.* §§ 158, 161 (trespass); *id.* § 222A (conversion); Ian Ayres, *Protecting Property With Puts*, 32 VAL. U. L. REV. 793, 828 (1998) (describing the scope of a property owner's right to be unencumbered by nuisance, trespass, and conversion).

70. 65 C.J.S. *Negligence* § 21 (2000).

liabilities, which usually lead to monetary relief.[71] Judges, of course, retain discretion to deny equitable relief when the harm of such relief outweighs the benefit, but when it comes to property, the baseline is more firmly rooted in equity under the theory that money cannot make the claimant whole when property has been lost.[72]

II. WATER AND WATER RIGHTS

According to Professor Carol Rose,

> If water were our chief symbol for property, we might think of property rights . . . in a quite different way. We might think of rights literally and figuratively as more fluid and less fenced-in; we might think of property as entailing less of the awesome Blackstonian power of exclusion and more of the qualities of flexibility, reasonableness and moderation, attentiveness to others, and cooperative solutions to common problems.[73]

This is a compelling statement, but it begs the question: whether interests in water are indeed Property, with a Capital P, in all of its glorious wonder. If so, are they Property at all times and in all contexts, or just a limited form of property, cognizable some of the time, only in some contexts?

A. The Nature of Water and the Public Trust Doctrine

Water is a unique resource. Its physical properties are unlike any other natural resource or thing. It is essential to all life; few substances share this distinction. There is no capacity for exclusive possession of water in a stream, a lake, or even an irrigation ditch. It is constantly moving along the surface, seeping into the ground, evaporating into the air, and being taken up by plants, fish, and other aquatic species. Quantities are never

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71. *See* Louis Kaplow & Steven Shavell, *Property Rules Versus Liability Rules: An Economic Analysis*, 109 HARV. L. REV. 713, 715-16 (1996); James E. Krier & Stewart J. Schwab, *Property Rules and Liability Rules: The Cathedral in Another Light*, 70 N.Y.U. L. REV. 440, 442-43 (1995); Susan Rose-Ackerman, *Inalienability and the Theory of Property Rights*, 85 COLUM. L. REV. 931, 931-38 (1985); Emily Sherwin, *Introduction: Property Rules as Remedies*, 106 YALE L.J. 2083, 2085 (1997); *see also* Merrill & Smith, *supra* note 22, at 381, 395 (noting that injunctive remedies and specific performance "have a long association with common-law property rights," particularly trespass).

72. *See* 66 C.J.S. *Nuisances* § 94 (1998) ("Where a business can be conducted so as not to injure another in the use of his property, the latter is entitled to an injunction against an operation as a nuisance."); H.H. Henry, Annotation, *Injunction Against Repeated or Continuing Trespasses on Real Property*, 60 A.L.R.2d 310 § 3 (1958) ("[T]he rule is well settled . . . that injunction is a proper remedy to restrain repeated or continuing trespasses where the legal remedy is inadequate.").

73. Carol M. Rose, *Property as the Keystone Right?*, 71 NOTRE DAME L. REV. 329, 351 (1996).

entirely certain; drought, precipitation, and variable human uses create ever-changing circumstances.

According to Professor Joseph Sax, who has written frequently on the nature of property rights, the uniqueness of water is universally recognized:

> The roots of private property in water have simply never been deep enough to vest in water users a compensable right to diminish lakes and rivers or to destroy the marine life within them. Water is not like a pocket watch or a piece of furniture, which an owner may destroy with impunity. The rights of use in water, however long standing, should never be confused with more personal, more fully owned, property.[74]

Beyond pocket watches and arm chairs, water and land—that quintessential symbol of private property—are different in many ways. All people must have access to water to satisfy their thirst and sanitary needs, but not everyone needs to own land for there to be adequate food.[75] Moreover, surface water is migratory and difficult to apportion, while land is stationary and relatively easy to divvy up into parcels.[76]

The physical characteristics and essential nature of water, in contrast to land and other things, have led human societies throughout time to treat water in a communal manner.[77] The conceptual underpinnings of this approach, however, continue to evolve. Once upon a time, running waters and oceans were deemed "too plentiful and unbounded to reduce to private property."[78] This perception gave way to the understanding that fresh water supply is scarce and often inaccessible in areas where it is most needed; water is an essential resource upon which entire societies depend for survival.[79] At the same time, certain aspects of both fresh water and oceans, such as shorelines, navigable waterways, and tidal areas, are so

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74. Joseph L. Sax, *The Limits of Private Rights in Public Waters*, 19 ENVTL. L. 473, 482 (1989).

75. Myrl L. Duncan, *Reconceiving the Bundle of Sticks: Land as a Community-Based Resource*, 32 ENVTL. L. 773, 798 (2002).

76. *Id.*

77. *See* Salzman, *supra* note 5, at 96.

78. Carol Rose, *The Comedy of the Commons: Custom, Commerce, and Inherently Public Property*, 53 U. CHI. L. REV. 711, 718 n.29 (1986) (citing 2 HUGO GROTIUS, DE JURE BELLI AC PACIS 190 (Kelsey trans., 1925)). As Professor Rose noted, "The 'plenitude' or 'boundlessness' exceptions . . . fail to explain the 'publicness' of those properties that our traditional doctrines most strongly deemed public property. Roadways, waterways, and submerged lands . . . are hardly so copious or so unbounded that they are incapable of privatization. Riverbeds and shorelands can be staked out, roadways can be obstructed, waterways diverted, squares plowed up; in short, they can easily be 'reduced to possession' in the classic common law manner of creating proprietary rights out of a 'commons.'" *Id.* at 718.

79. *See* Joseph L. Sax, *Understanding Transfers: Community Rights and the Privatization of Water*, 1 HASTINGS W.-NW. J. ENVTL. L. & POL'Y 13, 13 (1994).

necessary to individual and community survival that they are considered part of the *jus publicum*—the public right—and therefore beyond the purview of private ownership.[80]

In systems built upon Roman or English legal foundations, water is viewed as a type of communal resource, a "public trust," where the sovereign retains rights and responsibilities to protect the resource for the public.[81] Roman, English, and early American law recognized only a usufructuary right in riparian landowners to use water, and then only so long as its flow remained undiminished for use by downstream riparians.[82] The public trust doctrine is not limited to jurisdictions with Roman or English roots. There is "an astonishingly universal regard for communal values in water worldwide."[83] A review of Asian, African, Islamic, Latin American, and Native American laws reveals that the doctrine has been embraced by many societies with divergent legal traditions.[84]

The doctrine has enjoyed modern staying power in the United States through the work of legal scholars and judicial opinions at both the federal and state level.[85] Courts have referenced it in granting public access for navigation and fishing,[86] and, in some cases, in recognizing the right of the public to preserve its waters to support fish and wildlife species.[87]

In the eastern United States, the public trust doctrine underlies the law of riparianism, where land owners adjacent to a natural watercourse possess usufructuary rights to water that flows through or past their land, but are liable for monetary damages or injunctive relief if they deplete the natural flow in a way that harms other users.[88] The natural flow rule was founded on the premise that land and water flowing by it were not a com-

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80. Rose, *supra* note 78, at 713; Joseph L. Sax, *The Constitution, Property Rights and the Future of Water Law*, 61 U. COLO. L. REV. 257, 269 (1990); Harry N. Scheiber, *Public Rights and the Rule of Law in American Legal History*, 72 CAL. L. REV. 217, 224–25 (1984). For an in-depth discussion of the development of the public trust doctrine in the United States, see Richard J. Lazarus, *Changing Conceptions of Property and Sovereignty in Natural Resources: Questioning the Public Trust Doctrine*, 71 IOWA L. REV. 631, 633–41(1986).

81. *See* Duncan, *supra* note 75, at 791–92 (citing 1 SAMUEL C. WEIL, WATER RIGHTS IN THE WESTERN STATES 10–13 (3d ed. 1911)).

82. JOSHUA GETZLER, A HISTORY OF WATER RIGHTS AT COMMON LAW 1–3 (2d ed. 2006); Duncan, *supra* note 75, at 792.

83. Erin Ryan, Comment, *Public Trust and Distrust: The Theoretical Implications of the Public Trust Doctrine for Natural Resource Management*, 31 ENVTL. L. 477, 478 (2001).

84. Charles F. Wilkinson, *The Headwaters of the Public Trust: Some Thoughts on the Source and Scope of the Traditional Doctrine*, 19 ENVTL. L. 425, 429–31 (1989).

85. Professor Rose notes that the doctrine has enjoyed three waves of popularity, the most recent of which was jump-started by Joseph Sax. Rose, *supra* note 78, at 729–30 (citing Joseph L. Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471 (1970)). For analysis of state caselaw, see Eric Pearson, Illinois Central *and the Public Trust Doctrine in State Law*, 15 VA. ENVTL. L.J. 713, 720 n.40 (1996).

86. *See* Ill. Cent. R.R. Co. v. Illinois, 146 U.S. 387, 436–37 (1892); Martin v. Waddell's Lessee, 41 U.S. 367, 406–12 (1842); State v. McIlroy, 595 S.W.2d 659, 663–66 (Ark. 1980).

87. Nat'l Audubon Soc. v. Superior Court, 658 P.2d 709, 726 (Cal. 1983).

88. *See* Freyfogle, *Common Wealth*, *supra* note 20, at 49.

modity for production but rather an amenity to be enjoyed for its own sake as an attribute of "dominion" over real property by the landed English and colonial gentry.[89] Rather than restricting waterways for enjoyment by landowners, however, the usufructuary principle in effect subordinates private rights to community interests by recognizing limited private rights of riparian landowners to engage in both consumptive and nonconsumptive uses, while protecting the public's right to use the streams for nonconsumptive uses, such as navigation and fishing.[90]

By the time the Industrial Revolution rolled around in the early 1800's, it became apparent that development of water resources would be necessary to support textile mills, tanneries, and other activities.[91] The principle of undiminished natural flow evolved into the doctrine of reasonable use,[92] which allows all reasonable uses of water on the riparian tract, even if natural flows are diminished.[93] The new doctrine retains a concern for the public interest by prohibiting unreasonable uses that harm adjoining neighbors or prevent public access.[94] Today, the riparian doctrine, as adopted in most eastern states, incorporates an explicit public interest consideration into the definition of reasonableness.[95] Reasonableness is a question of fact resolved by the courts on a case-to-case basis when disputes arise.[96] A riparian who experiences substantial harm will attempt to show that the defendant's use is unreasonable through the application of a multifactored balancing test that considers local customs, the necessity and suitability of the use to the affected area, the types of competing uses and their importance to society, the needs of other riparians, and the fairness of requiring either party to bear the loss.[97]

The riparian limitation eventually carried over into American groundwater law as well. American courts initially followed the English doctrine of "absolute ownership," a straightforward rule of capture allowing whoever had the biggest pump to withdraw groundwater for use in any fashion, anywhere the capturer pleased.[98] The majority of states soon de-

89. Morton J. Horwitz, *The Transformation in the Conception of Property in American Law, 1780–1860*, 40 U. CHI. L. REV. 248, 253 (1973).

90. Duncan, *supra* note 75, at 794.

91. *See* Sax, *supra* note 74, at 267–68.

92. Duncan, *supra* note 75, at 794.

93. *See* Christine A. Klein, *On Integrity: Some Considerations for Water Law*, 56 ALA. L. REV. 1009, 1041 (2005).

94. Duncan, *supra* note 75, at 794–95.

95. *Id.* at 795.

96. *See* RESTATEMENT (SECOND) OF TORTS § 850A (1979).

97. *See* Snow v. Parsons, 28 Vt. 459 (Vt. 1856); RESTATEMENT (SECOND) OF TORTS § 850A (1979).

98. Acton v. Blundell, 152 Eng. Rep. 1223, 1223–24 (Exch. 1843). For a compelling view of the doctrine's adoption by judges in America, see MORTON J. HORWITZ, THE TRANSFORMATION OF AMERICAN LAW 1780–1860, at 105 (1977), concluding that laissez-faire assumptions played a strong role.

viated from that doctrine in order to prevent pernicious, wasteful results.[99] Most eastern jurisdictions now follow the American reasonable use doctrine, which allows any non-malicious, non-wasteful uses on the overlying tract.[100] Others have adopted variations of several other groundwater doctrines, such as correlative rights, prior appropriation, or liability rules based on the Restatement (Second) of Torts.[101] Only a few jurisdictions continue to adhere to "absolute ownership" as a rule governing groundwater use.[102] Ironically, this doctrine—a misnomer if ever there was one—results in the utter lack of protection for established interests. As soon as someone with a more powerful pump comes along, existing uses of the aquifer can be diminished or completely eviscerated, with no legal recourse.[103]

In the American West, the scarcity of surface water resources and limitations on opportunities for riparian land ownership prompted courts and legislatures to turn away from riparianism and craft a new system of water rights known as prior appropriation, based on the principle of "first in time, first in right."[104] Although this system promotes privatization of surface water resources to a greater extent than riparianism, legislatures, agencies, and courts have struggled to craft legal tools to balance individual rights with the collective rights of other water users and society as a whole.[105] The public trust doctrine is frequently cited by western courts, but it has rarely operated as a significant curb on private rights.[106] In a marked deviation from this trend, the Supreme Court of California indicated a willingness to impose the doctrine on appropriators in *National Audubon Society v. Superior Court* (the Mono Lake case):

> The state as sovereign retains continuing supervisory control over its navigable waters and the lands beneath those waters. This principle, fundamental to the concept of the public trust, applies to rights in flowing waters as well as to rights in tidelands and lakeshores; *it prevents any party from acquiring a vested right to ap-*

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99. *See* JOSEPH L. SAX ET AL., LEGAL CONTROL OF WATER RESOURCES: CASES AND MATERIALS 366 (3d ed. 2000).

100. *Id.* at 366, 373 (quoting Martin v. City of Linden, 667 So. 2d 732, 738-39 (Ala. 1995)).

101. *Id.* at 366.

102. *Id.*; *see also* Maddocks v. Giles, 728 A.2d 150, 153 (Me. 1999) (recognizing that the rule is in the minority in America); Sipriano v. Great Spring Waters of America, 1 S.W.3d 75, 79-81 (Tex. 1999) (affirming the rule as the law in Texas).

103. Frazier v. Brown, 12 Ohio St. 294, 308 (Ohio 1861), *overruled by* Cline v. Am. Aggregates Corp., 474 N.E.2d 324 (Ohio 1984). *Frazier* is merely an example of the strength of the doctrine in its pure form. Ohio has since rejected absolute ownership and adopted the Restatement position. *See Cline*, 474 N.E.2d at 327.

104. Westlands Water Dist. v. United States, 337 F.3d 1092, 1101 (9th Cir. 2003); *see infra* Subpart II.B (detailing the prior appropriation system of surface water rights).

105. *See infra* Subpart II.B.

106. *See* NAT'L RESEARCH COUNCIL, WATER TRANSFERS IN THE WEST 101 (1992).

propriate water in a manner harmful to the interests protected by the public trust.[107]

As a result, in California, the state water board must consider the public trust in administering water rights and in making decisions on the application for, or transfer of, water rights.[108] In spite of the court's bold language, or perhaps because of it, the Mono Lake decision has had relatively little impact on the exploitation of water resources in the West. The case is frequently cited,[109] but few other states have embraced it as precedent.[110] Most western states do, however, scrutinize new appropriations and transfers or changes in use to prevent harm to other users or to the public interest.[111]

A strong parallel to the public trust doctrine can be seen in international law, where various conventions and declarations identify water as a basic human right, either on its own or as a necessary incident of other human rights.[112] A few national constitutions recognize access to water as a human right.[113] By imposing a duty on governments to guarantee access to water supplies, the ideal of a human right to water, like the public trust doctrine, serves as a counterbalance to privatization forces.[114]

B. Appropriative Rights

Prior appropriation arose during the late 1800s as a way to maximize the use of a scarce resource in the arid west and to promote settlement and economic development.[115] Experiences with scarcity led western societies

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107. 658 P.2d 709, 727 (Cal. 1983) (emphasis added).

108. *See id.* at 732 (concluding that the state bears a continuing duty of supervision over appropriators of the state's waters in order to protect the public trust).

109. Cathy J. Lewis, *The Timid Approach of the Federal Courts to the Public Trust Doctrine: Justified Reluctance or Dereliction of Duty?*, 19 PUB. LAND & RESOURCES L. REV. 51, 56 (1998).

110. Reed D. Benson, *"The Supreme Court of Science" Speaks on Water Rights: The National Academy of Sciences Columbia River Report and Its Water Policy Implications*, 35 ENVTL. L. 85, 123 n.189 (2005).

111. Douglas L. Grant, *Two Models of Public Interest Review of Water Allocation in the West*, 9 U. DENV. WATER L. REV. 485, 486 & n.1 (2006) (citing multiple state statutes to that effect).

112. *See, e.g.*, U.N. Econ. & Soc. Council [ECOSOC], Comm. on Econ., Soc. & Cultural Rights, *General Comment No. 15 (2002): The Right to Water (arts. 11 and 12 of the International Covenant on Economic, Social and Cultural Rights)*, U.N. Doc. E/C.12/2002/11 (Jan. 20, 2003); WORLD HEALTH ORGANIZATION, THE RIGHT TO WATER (2003), *available at* http://www.who.int/water_sanitation_health/rtwrev.pdf; *see also* M.A. SALMAN & SIOBHÁN MCINERNEY-LANKFORD, THE HUMAN RIGHT TO WATER, at ix (2004) (asserting that a human right to water is implicit in other recognized rights).

113. *See* S. AFR. CONST. 1996 art. 27(1)(b). For other constitutional provisions on rights to access water, see JOHN SCANLON ET AL., WATER AS A HUMAN RIGHT? 42–46 (2004), *available at* http://www.iucn.org/themes/law/pdfdocuments/EPLP51EN.pdf.

114. *See* Sarah I. Hale, Comment, *Water Privatization in the Philippines: The Need to Implement the Human Right to Water*, 15 PAC. RIM L. & POL'Y J. 765, 769 (2006).

115. Janet C. Neuman, *Beneficial Use, Waste, and Forfeiture: The Inefficient Search for Efficiency in Western Water Use*, 28 ENVTL. L. 919, 967 (1998).

to believe that the gains from private resource management would outweigh the costs of establishing and enforcing a system of private rights.[116]

Although the oft-repeated story is that westerners simply followed the customs of the mining camps in the use and allocation of water, the underlying objectives were almost certainly more complex. Prior appropriation's roots are as likely to be found in the populist inclinations of farmers and homesteaders, who strongly resisted speculative investment by monopolistic land barons and railroad companies.[117] Territorial courts and legislatures refused to allow speculators to corner the market and thereby exclude actual users from water resources.[118]

These populist underpinnings do not reflect anti-property sentiment, however. To the contrary, it is commonly accepted wisdom throughout the western United States that appropriative rights are a form of property.[119] Yet the laws applicable to water, treating it as a semi-privatized yet community-based resource and not as an ordinary commodity, are highly unique, and apply to "virtually nothing else."[120] A legally perfected water right, reflected in a judicial decree or an appropriative permit issued by a state agency, is sometimes characterized as an incorporeal hereditament.[121]As such, a water right does not constitute ownership of the water itself; it is instead usufructuary, or "a right to use water."[122] However, after the water has been diverted for use from a natural source, such as a river or lake, and placed into a stock tank, a bottle, or some other discrete container, it may be deemed personal property.[123]

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116. Rose, *supra* note 78, at 718 n.29 (citing Terry L. Anderson & P.J. Hill, *The Evolution of Property Rights: A Study of the American West*, 18 J.L. & ECON. 163, 177 (1975)).

117. High Plains A & M, LLC v. Se. Colo. Water Conservancy Dist., 120 P.3d 710, 719 n.3 (Colo. 2005) (citing Schorr, *supra* note 6, at 33, 41, 55–56).

118. *See id.*

119. *See* Joseph W. Dellapenna, *Special Challenges to Water Markets in Riparian States*, 21 GA. ST. U. L. REV. 305, 314–15 (2004).

120. Sax, *supra* note 79, at 14 ("The only other . . . example where things are treated like water . . . arises with cultural properties, antiquities . . . where the nation of origin asserts a . . . claim on the property . . . to prevent exports.").

121. Cori S. Parobek, Comment, *Of Farmers' Takes and Fishes' Takings: Fifth Amendment Compensation Claims When the Endangered Species Act and Western Water Rights Collide*, 27 HARV. ENVTL. L. REV. 177, 182 (2003) (quoting Marcus J. Lock, *Braving the Waters of Supreme Court Takings Jurisprudence: Will the Fifth Amendment Protect Western Water Rights from Federal Environmental Regulation?*, 4 U. DENV. WATER L. REV. 76, 82 (2000)). Incorporeal hereditaments are heritable, intangible rights in land use, such as easements, franchises, and rents. BLACK'S LAW DICTIONARY 782 (8th ed. 2004).

122. John C. Peck, *Title and Related Considerations in Conveying Kansas Water Rights*, J. KAN. B.A., Nov. 1997, at 38, 39; *see* John D. Leshy, *A Conversation About Takings and Water Rights*, 83 TEX. L. REV. 1985, 1986 (2005) (noting that both nature and the law "qualif[y] the very character of your property right [in water] in some important ways. It is not an absolute right by any means.").

123. 1C KELLY KUNSCH ET AL., WASHINGTON PRACTICE § 91.8 (4th ed. 1997); Charles E. Clark, *The Assignability of Easements, Profits and Equitable Restrictions*, 38 YALE L.J. 139, 150 (1928).Clark argues that an interest in water should be treated like a profit rather than "merely personal" because the interest "is sufficiently important, and such expenditures have been made in contemplation of its assignability . . . ." *Id.*

The prior appropriation regime serves as a simple way to determine who gets to use water, how much he or she can use, and when. Priority is given to whomever is "first in time,"[124] meaning that junior users may get water only if all senior water rights are fulfilled.[125] The measure of a right to use water is quantified by how much the actor diverts for "beneficial use."[126] Beneficial use is typically defined by state statutes to include just about any domestic, agricultural, or industrial activity.[127] Although wasteful uses are not beneficial, definitions of "waste" are generally quite lenient and laws prohibiting waste are rarely enforced.[128] The benchmark—historic, conventional uses and technologies—forgives many wasteful uses.[129]

Like riparianism, western water rights are appurtenant to the land on which the water is used, but, unlike riparianism, the water need not be used on a riparian tract. Instead, it can be applied for beneficial use anywhere, and, once secured through application for beneficial use, appropriative water rights can be conveyed by deed, lease, mortgage, or inheritance as an appurtenance with a conveyance of the land where the water was initially put to use.[130] Changes in places or types of use are tightly controlled by state statutes and common law, however, to ensure that no harm will come to other appropriators as a result of the change.[131] This means that changes and transfers have been the exception rather than the norm. In other words, even in western jurisdictions, water rights are not viewed as an ordinary commodity, even though the ability to transfer senior priorities to other uses and locations to promote more efficient or more socially valuable uses has become increasingly desirable.[132]

Water rights and water transfers may be further restricted by the terms of a delivery contract with a water supplier, such as an irrigation district or the U.S. Bureau of Reclamation.[133] Reclamation contracts typically excuse the United States for delivery shortages in case of drought, and they often include provisions that preserve regulatory authority to limit

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124. City of Barstow v. Mojave Water Agency, 5 P.3d 853, 863 (Cal. 2000).
125. *Id.*
126. Neuman, *supra* note 115, at 920.
127. *See id.* at 926–27.
128. *Id.* at 922, 958–61, 975.
129. *See id.* at 933–46.
130. *See* Douglas L. Grant, *ESA Reductions in Reclamation Water Contract Deliveries: A Fifth Amendment Taking of Property?*, 36 ENVTL. L. 1331, 1336 (2006); *supra* note 120 and accompanying text.
131. *See* Grant, *supra* note 130, at 1336-37.
132. *See* Sax, *supra* note 79, at 14–15.
133. *See* Stockton E. Water Dist. v. United States, 76 Fed. Cl. 497, 500 (2007) (finding that a provision of a contract with the Bureau of Reclamation for the appropriation of water from federal reservoir absolved the government of liability for shortages "because of drought, or other causes which, in the opinion of the Contracting Officer, are beyond the control of the United States").

deliveries to fulfill environmental or other needs.[134] In addition, external forces, both physical and legal, operate on the appropriative system. Water rights are limited by uncertainties imposed by hydrologic variability, such as drought, flooding, and the extraction of hydrologically connected groundwater.[135] They are also limited by competing legal demands from forces outside of the appropriative system, particularly requirements for fulfilling interstate compacts as well as streamflow protections imposed by federal treaties and federal and state environmental laws.[136]

What happens when external constraints result in restrictions or curtailment of an appropriator's water supply? That depends in large part on whether a water right is property for constitutional law purposes or whether it is a more limited interest of some sort.

III. A TAXONOMY OF PROPERTY: LOCKEAN BUNDLES, HOBBESIAN STICKS, AND STICKY WEBS

American academic commentary on the defining characteristics of property is "surprisingly thin," given the importance attached to characterization as property in the law.[137] Those who have dug deep into the nature and content of property tend to look at either the objectives of property law or the standard incidents of property in search of a definition.

At least some level of consensus can be reached regarding the fundamental objectives of property. Property law serves several vital functions. First, it provides a line of demarcation between individual rights and the state's sovereign power by maximizing security through wealth and by promoting individual expression and political freedom.[138] Property law can also promote self-actualization through things like one's home, often referred to as one's castle, no matter how humble it may be, and items inherited from one's parents or other loved ones, cherished pieces of art, wedding rings, and even automobiles.[139] For these reasons, private property

134. Klamath Irrigation Dist. v. United States, 67 Fed. Cl. 504, 535–37 (2005) (remarking that a reduction in water deliveries to protect endangered species were unlikely to breach Bureau of Reclamation contracts either because the contracts contain a water shortage clause authorizing reduced deliveries or because the sovereign acts doctrine makes government contracts subject to subsequent legislation of general applicability); Klamath Irrigation Dist. v. United States, 75 Fed. Cl. 677, 695 (2007) (dismissing contract claims against the Bureau of Reclamation on the basis of the sovereign acts doctrine).

135. *See* TARLOCK, *supra* note 28, §§ 2.3–.6 (2000).

136. *See, e.g.*, Kansas v. Colorado, 533 U.S. 1 (2001) (involving Colorado's overuse of water in violation of an interstate compact with Kansas); Susan J. Buck et al., *"The Institutional Imperative": Resolving Transboundary Water Conflict in Arid Agricultural Regions of the United States and the Commonwealth of Independent States*, 33 NAT. RESOURCES J. 595, 618–20 (1993).

137. Merrill, *supra* note 30, at 890–91.

138. *See* RADIN, *supra* note 23, at 197–202.

139. *See* MARGARET JANE RADIN, CONTESTED COMMODITIES 57–58 (1996) (describing "constitutive property" as objects "closely related to one's personhood," like one's home or wedding ring); RADIN, *supra* note 23, at 195–202.

rights are taken more seriously than broad but amorphous rights to liberty in American law and, arguably, in American culture more generally.[140]

At the societal level, the rise of capitalism through privatization has served as a corollary to democracy in many contemporary societies worldwide, at least since the fall of the Berlin Wall.[141] Recognition of property rights provides a means of allowing persons to relate with each other in the marketplace.[142] Property law, then, promotes the social and economic values fostered by ownership in things of value. It helps create and safeguard stable relationships between persons and things, allowing both property owners and the broader community to extract the greatest value from the thing.[143]

Yet very little consensus exists regarding a definition, much less the necessary elements, of property. Historically, property rights were viewed as *in rem,* governing only those relationships closely tied to a discrete thing.[144] Shortly after the turn of the twentieth century, however, Wesley Hohfeld insisted that property rights are not rights to things at all, but instead are a multitude of personal rights and relationships.[145] This relational, *in personam* approach quickly took hold, fostered by the growing field of law and economics.[146] It views property as any relationship between persons with one or more legal rights bundled in virtually any combination of incidents or attributes associated with ownership.[147] Hohfeld's effort to reduce *in rem* rights to clusters of *in personam* rights provided the foundation for the "bundle of rights" metaphor, which gained popularity among

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140. RADIN, *supra* note 23, at 14; *see* JENNIFER NEDELSKY, PRIVATE PROPERTY AND THE LIMITS OF AMERICAN CONSTITUTIONALISM 224, 272 (1990) (explaining the rhetorical power of the "myth" of property to our moral and legal culture, and describing property as portrayed by "Madisonian constitutionalism" as "the ideal symbol for [that] vision of autonomy" because it allows us to erect a wall between ourselves and others); Hanoch Dagan & Michael A. Heller, *The Liberal Commons*, 110 YALE L.J. 549, 567–69 (2001) (arguing that protecting property protects other fundamental rights by enabling owners to dissociate from relationships with others); Eduardo M. Peñalver, *Property as Entrance*, 91 VA. L. REV. 1889, 1890 (2005) (noting that theorists "frequently make . . . [the claim] that property rights must be protected because they constitute the very foundation for many other liberties").

141. *See generally* Aslam A. Jaffery, Comment, *Economic Freedom and Privatization—From Egypt and Mesopotamia to Eastern Europe*, 28 DENV. J. INT'L L. & POL'Y 365 (2000).

142. Schroeder, *supra* note 56, at 303–04.

143. Bell & Parchomovsky, *supra* note 61, at 533, 536.

144. *See* Merrill & Smith, *supra* note 22, at 358–59; JOSHUA GETZLER, A HISTORY OF WATER RIGHTS AT COMMON LAW (2006); MICHAEL TAGGART, PRIVATE PROPERTY AND ABUSE OF RIGHTS IN VICTORIAN ENGLAND (2002).

145. *See* Wesley Newcomb Hohfeld, *Fundamental Legal Conceptions as Applied in Judicial Reasoning*, 26 YALE L.J. 710 (1917); Wesley Newcomb Hohfeld, *Some Fundamental Legal Conceptions As Applied to Judicial Reasoning*, 23 YALE L.J. 16 (1913). Hohfeld argued that land was no longer the primary basis of wealth, having been supplanted by intangible business interests. *Id.* This meant that "the number of persons affected by or asserting rights in a particular property interest increased, leading courts to replace Blackstone's absolutist conception of ownership with one that emphasized balance among the competing interests." Duncan, *supra* note 75, at 779 n.14 (citing Vandevelde, *supra* note 42).

146. *See* Merrill & Smith, *supra* note 22, at 357–59.

147. *See id.* at 357.

legal realists in the 1920s and 1930s and gathered even more steam with the law and economics movement, beginning in 1960.[148] Today, the predominance of the relational paradigm in American law "is undeniable."[149] But it leaves us with no commonly accepted, concrete definition of property, leading some commentators to lament the death of property as a principled legal concept.[150]

This Part demonstrates that, not only must we look at the thing in question, we must also consider the context. A thing might be property in one situation or for the purposes of one type of claim but not others. Specifically, a thing might be property for purposes of protection from common law conversion by others or from curtailment without due process, but not for the purposes of a regulatory takings claim against the government.[151] Because the bundle of sticks metaphor does not capture the two-dimensional nature of property, we propose a web of interests as a more nuanced, yet more resilient, symbol for property.[152]

A. It Don't Mean a Thing if it Ain't Got that Thing[153]

The U.S. Constitution lacks a definition of property, even though it explicitly protects property from governmental invasion in several ways.[154] Property interests, then, are created and defined by norms and rules flowing from an independent source such as state law.[155]

In contemporary jurisprudence, reflected in the Restatement (First) of Property, the term "property" is used to describe "legal relations between

148. *See* MORTON J. HORWITZ, THE TRANSFORMATION OF AMERICAN LAW 1870–1960, at 9–36, 151–56 (1992); Merrill & Smith, *supra* note 22, at 365; Vandevelde, *supra* note 42, at 361 ("Hohfeld both demonstrated that property does not imply any absolute or fixed set of rights in the owner and provided a vocabulary for describing the limited nature of the owner's property.").

149. J. E. Penner, *The "Bundle of Rights" Picture of Property*, 43 UCLA L. REV. 711, 713 (1996).

150. *See* Duncan, *supra* note 75, at 779 n.14 (noting that by conceiving of property as a "bundle of legal relations," Hohfeld contributed to the subversion of property rights); Merrill & Smith, *supra* note 22, at 357 ("Property has fallen out of fashion."); Schroeder, *supra* note 56, at 239 ("Property was dead . . . . The coroner, Wesley Newcomb Hohfeld, revealed that the unity, tangibility, and objectivity of property perceived by our ancestors was a phantom.").

151. *See infra* notes 202–237 and accompanying text.

152. *See* Shi-Ling Hsu, *A Two-Dimensional Framework for Analyzing Property Rights Regimes*, 36 U.C. DAVIS L. REV. 813 (2003) (arguing that property rights should be classified on a gradient based on two characteristics—the type of dominant right (usage or exclusion) and the size of the party holding that right (individual or group)—which allows forms of property to be categorized and mapped in two-dimensional space).

153. Apologies to the memory of Duke Ellington for spinning his song to suit our purposes.

154. *See* U.S. CONST. amend. V; *id.* amend. XIV, § 1. The Fifth and Fourteenth Amendments apply to both federal and state action. Penn Cent. Transp. Co. v. City of New York, 438 U.S. 104, 122 (1978). Federal property is explicitly addressed in Article IV, which provides Congress with the authority to make needful rules and dispose of federal property. U.S. CONST. art. IV, § 3.

155. Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1030 (1992) (citing Bd. of Regents v. Roth, 408 U.S. 564, 577 (1972)); Cleveland Bd. of Educ. v. Loudermill, 470 U.S. 532, 538 (1985).

persons with respect to a thing."[156] Of course, not all relationships entail property rights, and therein, as they say, lies the rub. In rather circular fashion, the U.S. Supreme Court has noted that "economic uses are rights only when they are legally protected interests."[157] Whether such uses are legally protected interests depends "on the substance of the enjoyment thereof for which [the claimant] claims legal protection; [and] on the legal relations of the adversary claimed to be under a duty to observe or compensate his interests."[158] This description is frustratingly vague and not at all helpful in attempting to discern a rule of general applicability.

In *Klamath Irrigation District v. United States*, the U.S. Court of Federal Claims framed its struggle to define property rights in water as follows:

> What is property? The derivation of the word is simple enough, arising from the Latin *proprietas* or "ownership," in turn stemming from *proprius*, meaning "own" or "proper." But, this etymology reveals little. Philosophers such as Aristotle . . . and Locke each, in turn, have debated the meaning of this term, as later did legal luminaries such as Blackstone, Madison and Holmes, and even economists such as Coase.[159]

Among the "luminaries" cited by the *Klamath* court, lawyers and law students are undoubtedly most familiar with Sir William Blackstone. The American view of private property in land has been indelibly shaped by Blackstone, who described it as "that sole and despotic dominion . . . over the external things of the world, in total exclusion of the right of any other."[160] Ironically, it is highly unlikely that landowners enjoyed unfettered rights to real property when Blackstone penned this phrase, and even Blackstone himself expressed misgivings about the notion of exclusive dominion.[161] Yet the concept seems to have taken on mythical proportions among property rights proponents and still exerts influence in the law today.[162] Although the importance of exclusivity in the possession and use of property can hardly be denied, it is not altogether clear why this is so.[163]

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156. RESTATEMENT (FIRST) OF PROP.: INTRODUCTION & FREEHOLD INTERESTS ch.1, introductory note at 3 (1936); *see* Duncan, *supra* note 75, at 779 n.14 (describing this commonly accepted definition as derivative of Wesley Hohfeld's work in the late 1800s).

157. United States v. Willow River Power Co., 324 U.S. 499, 503 (1945).

158. *Id.* The Court held that the federal navigational servitude precluded a landowner's claim for loss of property on a navigable river. *Id.* at 509, 511.

159. Klamath Irrigation Dist. v. United States, 67 Fed. Cl. 504, 506 (2005); *see* Brian E. Gray, *The Property Right in Water*, 9 HASTINGS W.-NW. J. ENVTL. L. & POL'Y 1, 1-2 (2002).

160. Sandra B. Zellmer & Scott A. Johnson, *Biodiversity in and Around McElligot's Pool*, 38 IDAHO L. REV. 473, 490 (2002) (quoting WILLIAM BLACKSTONE, 2 COMMENTARIES *2).

161. Duncan, *supra* note 75, at 783 n.25 (citing Carol M. Rose, *Canons of Property Talk, or, Blackstone's Anxiety*, 108 YALE L.J. 601, 601-02 (1998)).

162. *See* Eric T. Freyfogle, *The Owning and Taking of Sensitive Lands*, 43 UCLA L. REV. 77, 99-

One explanation might be found in natural law. Aristotle viewed the right to property as "inherent in the moral order." [164] He championed the primacy of private property as an expression of self-love, encouraging citizens to attend to their own affairs rather than meddling in the affairs of others.[165] Aristotle saw the right to exclude as a critical aspect of property rights "because it allowed owners to display virtue by waiving this right and sharing the benefits of property ownership with others."[166] Similarly, the philosopher John Locke viewed the institution of private property as "predating society, and thus *a priori*."[167] According to Locke, once individuals invest their labor to enhance and safeguard their interests, the state is forbidden from interfering with those rights because they become property, self-evidently, as a matter of natural law.[168]

Natural law, however, fails to provide either a workable definition of property or a clear delineation of core property rights.[169] Even Blackstone, who asserted that property is a right that "every man is entitled to enjoy, whether out of society or in it," characterized laws relating to property not as absolute but as qualified rights.[170] Enter Jeremy Bentham, who viewed property as a creature of law rather than some natural force: without law, there is no property.[171] "Right . . . is the child of law; from real laws come real rights; from imaginary laws, from laws of nature, fancied and invented by poets, rhetoricians, and dealers in moral and intellectual poisons, come imaginary rights, a bastard brood of monsters."[172]

Bentham and his succesors defined property "as a distinctive right in a thing good against the world that promotes security of expectations about the use and enjoyment of particular resources."[173] This positive law approach continues to enjoy wide acceptance among legal scholars and jur-

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100 (1995).

163. *See infra* notes 219–220 and accompanying text.

164. Bell & Parchomovsky, *supra* note 61, at 541 (citing ARISTOTLE, THE POLITICS ¶ 5, at 25–29 (Stephen Everson ed., 1988)).

165. *Id.*

166. *Id.*

167. Duncan, *supra* note 75, at 786. *See generally* RICHARD EPSTEIN, TAKINGS: PRIVATE PROPERTY AND THE POWER OF EMINENT DOMAIN 95 (1985) (invoking Locke to support arguments that the state can only regulate private property if it pays just compensation unless the regulation in question restrains nuisance-like conduct or provides reciprocal advantages).

168. Duncan, *supra* note 75, at 786.

169. Douglas W. Kmiec, *The Coherence of the Natural Law of Property*, 26 VAL. U. L. REV. 367, 369–70 (1991).

170. Merrill, *supra* note 30, at 944 n.226 (citing WILLIAM BLACKSTONE, 1 COMMENTARIES *119); *see* Carol M. Rose, *Canons of Property Talk, or, Blackstone's Anxiety*, 108 YALE L.J. 601, 603–04 (1998).

171. Duncan, *supra* note 75, at 786 n.42 (citing JEREMY BENTHAM, THEORY OF LEGISLATION: PRINCIPLES OF THE CIVIL CODE 111, 113 (Hildreth ed. 1931)).

172. Bell and Parchomovsky, *supra* note 61, at 543 (citing 2 JEREMY BENTHAM, *Anarchical Fallacies*, *in* THE WORKS OF JEREMY BENTHAM 489, 523, 501 (J. Bowring ed., 1983)).

173. Merrill & Smith, *supra* note 22, at 366.

ists.[174] Like Bentham, the Supreme Court has put the kibosh on natural law as an underpinning of property rights.[175] Bentham adherents, however, often neglect his caveat that property rights relate to particular things. An example can be seen in the law and economics view of property rooted in Ronald Coase's article, *The Problem of Social Cost*.[176] Coase's view of property as having "no function other than [as a] baseline for contracting" or allocating rights to use resources "hastened the demise of the *in rem* conception of property" and stimulated the conception of property as a cluster of *in personam* rights instead.[177]

If it is true that property law is just a loose collection of highly malleable sticks in a bundle of rights, or a mere background condition that facilitates exchange, then property can be defined as whatever a government deems worthy of protection.[178] This view inevitably leads to the "positivist trap"—quixotic, ad hoc decisionmaking resulting in too much or too little property relative to normative expectations.[179] It has freed the Supreme Court "arbitrarily to embrace some provisions of nonconstitutional law while ignoring others, all the while covering its tracks with circular arguments, *ipse dixits*, and smoke and mirrors."[180]

What is needed, then, is a tool that enables courts to craft principled, equitable parameters on rights in things protected as property. Analytical coherence can be brought to the notion of property first by identifying the *in rem* nature of property rights as a fundamental aspect of the law. Although those who believe that property is a right to a specified thing have been accused of "a childlike lack of sophistication,"[181] Professors Thomas Merrill and Henry Smith have made a solid case that property rights are in fact and indeed should be different from *in personam* rights:

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174. Duncan, *supra* note 75, at 786 n.42.

175. *See* Bd. of Regents v. Roth, 408 U.S. 564, 577 (1972); Merrill, *supra* note 30, at 944 ("[I]t would be extremely difficult for the Court at this point in time suddenly to 'discover' a set of [natural] property rights that originates directly in the Constitution and hence is immune from legislative modification.").

176. R.H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960); *see also* YORAM BARZEL, ECONOMIC ANALYSIS OF PROPERTY RIGHTS 3 (2d ed. 1997) (defining property as an individual's ability to consume a good directly or indirectly through exchange); RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 36–37 (5th ed. 1998) (arguing that the creation of individual ownership rights is a necessary condition for the efficient resource use); *cf.* Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089, 1119–20 (1972) (advocating that liability should be placed on the "cheapest cost avoider" to move society closer to optimal resource allocation); Kaplow & Shavell, *supra* note 71 (arguing for liability rules rather than entitlements to tangible things).

177. Merrill & Smith, *supra* note 22, at 359–60.

178. Merrill, *supra* note 30, at 949–50.

179. *Id.* at 950–51.

180. *Id.* at 951.

181. Merrill & Smith, *supra* note 22, at 358 (citing BRUCE A. ACKERMAN, PRIVATE PROPERTY AND THE CONSTITUTION 26–29 (1977)).

> Because core property rights attach to persons only through the intermediary of some thing, they have an impersonality and generality that is absent from rights and privileges that attach to persons directly. When we encounter a thing that is marked in the conventional manner as being owned, we know that we are subject to certain negative duties of abstention with respect to that thing—not to enter upon it, not to use it, not to take it, etc. And we know all this without having any idea who the owner of the thing actually is. In effect, these universal duties are broadcast to the world from the thing itself.[182]

Basically, Hohfeld and other legal realists "miss[] the point that property is a relationship between subjects that is mediated through an object."[183] In systems based on English law, property rights historically were regarded as *in rem* rights that attach to persons insofar as they have a relationship to a thing.[184] The law of property, then, governs relations between owners and others to a thing in order to determine the uses to which a thing may, or may not, be put, and to delineate spheres of power, private and public.[185] Property law should only apply to those things for which *in rem* ownership is necessary to realize the full value of the thing *vis à vis* the world.[186] Such rights confer on the person, known as the owner, the right to exclude a large and indefinite class of other persons from the thing.[187] In contrast, property law does nothing special to protect *in personam* interests, such as contracts and many types of regulatory permits; those interests are best suited for resolution through contract, tort, or public law mechanisms.[188]

Just because the bundle of rights relational paradigm has become orthodoxy in American legal thought does not mean it is without fault. Property is not just a random compilation of disparate rights.[189] Even Blackstone was emphatic that property was related to external things apart from one's self, be they corporeal or incorporeal.[190] Absent a focus on the nature of the thing in question and people's relationship to that thing, freewheeling formulations of various sticks within bundles of rights can be

182. *Id.* at 359.
183. Schroeder, *supra* note 56, at 292.
184. Merrill & Smith, *supra* note 22, at 360.
185. *See* Penner, *supra* note 149, at 801.
186. Bell & Parchomovsky, *supra* note 61, at 580–81.
187. *Id.*
188. *See* Thomas W. Merrill & Henry E. Smith, *The Property/Contract Interface*, 101 COLUM. L. REV. 773, 790–92 (2001) (drawing distinctions between *in rem* property rights and *in personam* contract rights).
189. Jeanne L. Schroeder, *Never Jam To-day: On the Impossibility of Takings Jurisprudence*, 84 GEO. L.J. 1531, 1554 (1996).
190. Schroeder, *supra* note 56, at 280 ("'The objects of dominion or property are *things*, as contradistinguished from *persons*.'" (quoting WILLIAM BLACKSTONE, 2 COMMENTARIES *16)).

readily applied to serve political ends that are neither normative nor consistent. When property is deprived of substantive meaning grounded in the relationship to some thing, individual stewardship and sustainable management may be stymied, while undue regulatory intervention and even redistribution may be facilitated.[191] "If property has no fixed core of meaning, but is just a variable collection of interests established by social convention, then there is no good reason why the state should not freely expand or, better yet, contract the list of interests in the name of the general welfare."[192] Since the early days of the Rehnquist Court, property rights have been strengthened rather than diminished under the bundle of rights rubric,[193] but the prevailing political winds could easily turn with the appointment of a different breed of judge.

Considering whether an interest in a thing enjoys the standard incidents of ownership is one way to break down the concept of property, but a list of property incidents only makes sense as criteria for identifying property if those incidents refer to the types of things that are appropriate objects of property law.[194] The bedrock incidents of ownership are the rights to exclusive possession or control and transferability.[195] If either exclusivity or transferability is not present, is the relationship something other than property, or is it perhaps some sort of "quasi-property"?[196] Conversely, if one or more incidents are present, does property necessarily exist? Take transferability, for example. Just because a thing can be traded for value does not make it property. J.E. Penner illustrates this point:

> [O]ur body parts are clearly material objects in the world, and so like other chattels are obvious candidates for criterial objects of property. . . . [But] [f]or a thing to be held as property, we must not conceive of it as an aspect of ourselves or our ongoing personality-rich relationships to others. The key is not alienability . . . for clearly we can deal with our body parts, our friendships, our

191. Merrill & Smith, *supra* note 22, at 365.

192. *Id.*

193. *See, e.g.*, Dolan v. City of Tigard, 512 U.S. 374, 393, 396 (1994) (finding a taking where the state exacted a public right-of-way in exchange for a permit); Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1027–28, 1031–32 (1992) (finding a taking where the potential for development was removed from the landowner's bundle of rights). *But see* Andrus v. Allard, 444 U.S. 51, 66 (1979) (stating that the destruction of "one 'strand' of the bundle [of property rights] is not a taking, because the aggregate must be viewed in its entirety").

194. Penner, *supra* note 149, at 800.

195. *See supra* note 29 and accompanying text (describing Honoré's incidents of property).

196. *See* Int'l News Serv. v. Assoc. Press, 248 U.S. 215, 236 (1918) (characterizing an interest in the collection of news as "quasi-property" as between two newspapers, "irrespective of the rights of either as against the public").

ability to work, and our civil rights in ways which benefit others; such dealings do not constitute the transfer of property.[197]

Is it also true, then, that prohibitions or restrictions on transferability strip a thing of its potential as property? Patterning definitions can provide a response to these questions by adding clarity and precision to the identification of personality-rich versus commodity-rich things and relationships.

B. Patterning Definitions

Professor Merrill strikes a balance between coherence and consistency, and flexibility and rigidity, in his patterning definitions for constitutional property.[198] He crafts a narrow definition for regulatory takings claims,[199] with broader definitions for due process claims.[200] Building on Merrill's work, a patterning definition for common law conversion claims can be identified as well.

Patterning definitions serve two primary purposes. First, they demonstrate the importance of context in identifying rights to property. In addition, they show whether property is at stake in a given situation in a non-arbitrary, normative way. More specifically, by identifying a set of interests that are typically regarded as being property in a particular context or circumstance, Merrill's patterning definitions closely track realistic expectations about property.[201]

1. Regulatory Takings Property

All of Merrill's patterning definitions require some degree of exclusive use and control, but for regulatory takings claims there must also be an irrevocable right to discrete, marketable assets.[202] This dichotomy is justified for several reasons. First, the distinction between takings property and due process property reflects the textual differences of the clauses. Unlike the Due Process Clauses, the Takings Clause of the Fifth Amend-

197. Penner, *supra* note 149, at 805–807, 817; *see* Arnold, *supra* note 24, at 292 ("American law recognizes property interests in business goodwill, but not friendship; in love songs, but not love; in celebrity identity, but not personality; and in expressions of ideas, but not ideas themselves. Thus, defining property rights, even in intangibles, requires attention to the interplay between the human relationships involved and the object of those relationships.") (footnotes omitted).

198. *See* Merrill, *supra* note 30, at 953.

199. *See infra* Subpart III.B.1

200. *See infra* Subpart III.B.2.

201. Merrill, *supra* note 30, at 979; *see* Eric T. Freyfogle, *Context and Accommodation in Modern Property Law*, 41 STAN. L. REV. 1529, 1531, 1551 (1989) (emphasizing the need and forecasting a move to consider the specific context in analyzing the nature of interests in land use and other forms of property); *id.* at 1545 (concluding that "water rights are context dependent rather than abstract").

202. Merrill, *supra* note 30, at 969, 974.

ment applies only to "private property."[203] Also, it refers specifically to things that are "taken" as opposed to merely "deprived."[204] The contrast between those two terms supports the conclusion that the Takings Clause is more limited than the Due Process Clauses:

> To *take* property connotes to seize, expropriate, or confiscate some thing, that is, a discrete asset. To *deprive* someone of property has a broader range of meanings; especially when coupled with the ideas of depriving someone of life or liberty, to deprive someone of property is either to dispossess them or to remove something of material value from them.[205]

Further justification can be found in the divergent historical underpinnings of the Takings and Due Process Clauses. The Takings Clause is firmly rooted in a concern for condemnation of conventional interests in land.[206] It was motivated in part by the proclivities of military units to requisition supplies without compensation during the Revolutionary War.[207] Anxieties about expropriations of colonial property belonging to British loyalists and nullification of British land grants also played some role.[208] All of the paradigmatic takings cases involved discrete assets.[209] In contrast, the Due Process Clause was intended to safeguard life, liberty, and property against the usual types of state-sanctioned punishment: executions, imprisonment, and fines and forfeitures.[210] Its scope was meant to be far broader than the physical confiscation of specific, discrete assets.[211]

Adopting a narrow definition of property for purposes of regulatory takings claims makes good sense from a functional perspective as well because the invocation of the Takings Clause has by far the most significant consequences:[212]

> [T]he Takings Clause, with its per se rules, its lack of a tradition of deference to local authorities and agencies, and its waiver of state sovereign immunity against claims for money damages, is

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203. *Compare* U.S. CONST. amend. V, *with id.* amend. XIV.
204. *Id.* amend. V.
205. Merrill, *supra* note 30, at 983–84 (emphasis added) (footnotes omitted).
206. *See* William Michael Treanor, *The Original Understanding of the Takings Clause and the Political Process*, 95 COLUM. L. REV. 782, 785–91 (1995) (describing early colonial practices related to physical confiscation of land and other things). We make no attempt to define eminent domain property in this Article, but surmise that it may be more inclusive than the definition of regulatory takings property. *See infra* Subpart III.B.1.
207. Merrill, *supra* note 30, at 984.
208. *Id.*
209. *Id.*
210. *Id.*
211. *See id.* at 984–85.
212. *Id.* at 985.

> strong medicine, best channeled into fairly narrow paths of government liability. . . . It is often enforced through categorical or per se rules—most prominently the rules making any permanent physical invasion a taking and requiring the payment of compensation for any regulation that deprives an owner of all economically viable use of property. Even the orthodox 'ad hoc' balancing test for determining when property is taken is applied by the Supreme Court with little or no deference to the decisions of local officials or regulators.[213]

In contrast, the relatively lenient consequences associated with violations of due process, such as remanding a case for pre-deprivation hearings, justifies broader coverage.[214] Quite simply, the costs of judicial review are likely to be lower.[215]

Merrill's patterning definition for takings property specifies three elements. It requires that non-constitutional sources of law confer (1) an irrevocable right (2) to exclude others (3) from discrete assets.[216] Merrill's test is nested, meaning that if all three elements are present, then the interest in question is a property right not only for takings analysis but also for due process and other purposes.[217] Conversely, if one or more elements are lacking, the interest might still be considered property for purposes of due process or other types of claims but not for regulatory takings purposes.[218]

Each of Merrill's elements warrants further discussion. First, the universal feature of constitutional property is exclusivity.[219] Exclusivity is undoubtedly a key feature of a common law property right; some have argued that it is in fact *the* key feature of property.[220] "Give someone the right to exclude others from a valued resource . . . and you give them property. Deny someone the exclusion right and they do not have property."[221] The conclusion that exclusivity is an invariant characteristic of private property has been embraced independently over and over again.[222]

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213. *Id.* at 985, 981 (footnotes omitted).
214. *Id.* at 985.
215. *Id.* at 985.
216. *Id.* at 969.
217. *See id.* at 983.
218. *See id.*
219. *See id.* at 970.
220. *See* Penner, *supra* note 149, at 742–43, 766 (arguing that all incidents of property can summed up in the right of exclusive use); *see also* Drye v. United States, 528 U.S. 49, 61 (1999) (finding that property includes the "power to channel" a resource); Dolan v. City of Tigard, 512 U.S. 374, 384 (1994) (requiring public access would deprive petitioner of the right to exclude others, "one of the most essential sticks in the bundle of rights" (quoting Kaiser Aetna v. United States, 444 U.S. 164, 176 (1979))); Int'l News Serv. v. Assoc. Press, 248 U.S. 215, 246 (1918) (Holmes, J., dissenting) ("Property depends upon exclusion by law from interference.").
221. Thomas W. Merrill, *Property and the Right to Exclude*, 77 NEB. L. REV. 730, 730 (1998).
222. Merrill, *supra* note 30, at 971; *see, e.g.*, J.E. PENNER, THE IDEA OF PROPERTY IN LAW 71 (1997); Felix S. Cohen, *Dialogue on Private Property*, 9 RUTGERS L. REV. 357, 374 (1954) (suggest-

Viewing exclusivity as the hallmark of property makes sense for at least three reasons. Exclusivity makes it relatively easy to identify with whom one must deal to accomplish the exchange of a thing, which lowers transaction costs and allows resources to move to uses with higher social and economic value.[223] The right to exclusive possession, even in non-use, also protects subjective values associated with things such as homes and cherished personal property, which fosters the development of personality, self-actualization and, in turn, community stability.[224] Recognizing exclusive possession and use rights also diffuses societal power and helps safeguard individual liberty.[225]

Exclusivity means the power to possess an item (physically or virtually) without undue interference from others and to direct whether and how the item will be used and who may use it.[226] This is evidenced by the types of interests commonly regarded as property, such as easements, profits, and real covenants, all of which include the right to exclude others from physically interfering with a particular land use.[227] Likewise, one who holds an intellectual property right has a right to exclude others from the use of ideas and images, while mortgagees and lien-holders hold rights to exclude others from impairing their security interests.[228]

There may be degrees of exclusivity that warrant treatment as property in some circumstances but not in others. A license, for example, is merely a "permission slip" from someone who holds the right to exclude but agrees to allow another to gain access.[229] Culturally significant artwork and other forms of cultural property provide another example where one who possesses the artwork has relatively limited rights to exclusive possession and disposition.[230]

Elements specific to the patterning definition for a regulatory takings claim are irrevocability and the discrete asset requirement.[231] Irrevocability does not mean that the interest never expires. Instead, there must be a strong degree of security of expectation:

> For takings purposes . . . property must be "vested" in roughly the same sense that a common-law property right is vested and a mere license is not. Basically, takings property must be irrevoca-

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ing that the right to exclude the world from the thing we call property captures the central features of common-law property that make it such a valuable social institution).

223. *See* Merrill, *supra* note 30, at 972–73.
224. *See id.* at 973.
225. *Id.*
226. *Id.* at 971–72.
227. *Id.* at 972.
228. *Id.*
229. *Id.* at 976.
230. *See infra* Subpart IV.C (assessing individual and communal interests in art).
231. *See* Merrill, *supra* note 30, at 969.

> ble for a predetermined period of time, and there must be no understanding, explicit or implicit, that the legislature has reserved the right to terminate the interest before this period of time elapses.[232]

Merrill concedes that efforts to distinguish between vested, irrevocable rights and mere privileges or licenses are "prone to circularity."[233] For purposes of the patterning definition, interests in property entail a high level of security against legal change and be durable and irrevocable for a set time period.[234] Irrevocability also implies rights to devise or convey the thing to others. Federally issued grazing permits, for example, are mere licenses that cannot be freely conveyed and that are revocable during the permit period for noncompliance and for various other reasons.[235] As such, there is no takings property,[236] but licenses can constitute due process property.[237]

Finally, the takings claimant must show that a discrete asset is at stake. This requirement hones in on the thing governed by the owner's right to exclude.[238] It must be a valuable resource identifiable as something that is owned, as opposed to being inherently personal, inherently public, or just plain old "stuff."[239] It entails a distinct tangible or intangible thing that exists in a legally recognized property form, such as a lease, an easement, a trademark, or a bank account.[240] In addition, it must be something that is exchanged by economic actors with enough regularity and frequency to be recognized as a distinct asset.[241] Thus, the essential incident of transferability is reflected in this component of Merrill's patterning definition.

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232. *Id.* at 978.
233. *Id.* at 962.
234. *Id.* at 969, 978.
235. *See* Hage v. United States, 51 Fed. Cl. 570, 586–87 (2002)
236. United States v. Fuller, 409 U.S. 488, 493–94 (1973); Klump v. United States, 30 F. App'x 958, 962 (Fed. Cir. 2002); Hage v. United States, 35 Fed. Cl. 147, 167–70 (1996). Grazing permits lack other key incidents of property as well. For example, permittees have no right to exclude others from the federal grazing allotment. *See* Swim v. Bergland, 696 F.2d 712, 719–20 (9th Cir. 1983).
237. *See, e.g.*, Conti v. United States, 291 F.3d 1334, 1342 (Fed. Cir. 2002) (holding that a fishing permit bestowed a revocable license, not a Fifth Amendment property right); *Klump*, 30 F. App'x at 962 (holding that a grazing permit is not a compensable property right).
238. *See supra* Subpart III.A. (describing need to focus property inquiries on the thing in question).
239. *See* Merrill, *supra* note 30, at 975.
240. *See id.* at 974. In contrast, an incident of ownership, such as a right to inherit, is not itself "discrete property" but rather a right incident to discrete property. *Id.* at 974–75.
241. *Id.* at 974; *see id.* at 975–76 ("In most cases involving takings property, it will be obvious that there is both a readily identifiable discrete resource (the land, the chattel, the bank account) and a right to exclude with respect to that resource (conferred by ownership of a fee simple, a lease or an easement).").

2. Procedural Due Process Property

Procedural due process requires that, prior to an action affecting an interest in property, notice must be given which is "reasonably calculated, under all the circumstances, to apprise interested parties of the pendency of the action and afford them an opportunity to present their objections."[242] Courts have interpreted due process property extraordinarily broadly, stretching the concept of property well beyond ownership of land and chattels to encompass public employment,[243] education,[244] and various kinds of licenses.[245] For due process purposes, property appears to encompass just about every kind of legally sanctioned entitlement.[246]

In *Goldberg v. Kelly*, the Supreme Court found that due process requires states to follow extensive hearing procedures before terminating welfare benefits.[247] It retrenched somewhat in *Board of Regents v. Roth*, where it took pains to explain that due process is required only for those entitlements with discernible boundaries.[248] There, it held that an assistant professor without tenure did *not* have a property right sufficient to require university authorities to give him a hearing when they declined to renew his contract of employment, where the contract specified only a one-year term and lacked any provision for renewal.[249]

> The Fourteenth Amendment's procedural protection of property is a safeguard of the security of interests that a person has already acquired in specific benefits. . . . To have a property interest in a benefit, a person clearly must have more than an abstract need or desire for it. He must have more than a unilateral expectation of it. He must, instead, have a legitimate claim of entitlement to it.[250]

According to the Court, a "legitimate claim of entitlement" involves only those benefits or things that people rely on in their daily lives.[251]

Subsequently, the Court clarified its due process test by emphasizing the element of exclusivity. In *College Savings Bank v. Florida Prepaid Postsecondary Education Expense Board*, it held that a statutory cause of

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242. Mullane v. Cent. Hanover Bank & Trust Co., 339 U.S. 306, 314 (1950).
243. *See* Perry v. Sindermann, 408 U.S. 593, 602–03 (1972).
244. *See* Goss v. Lopez, 419 U.S. 565, 573–74 (1975).
245. *See, e.g.*, Barry v. Barchi, 443 U.S. 55, 64 (1979) (professional licenses); Bell v. Burson, 402 U.S. 535, 539 (1971) (drivers' licenses).
246. *See* Bell & Parchomovsky, *supra* note 61, at 583 n.273. *But see* Town of Castle Rock v. Gonzales, 545 U.S. 748, 764–66 (2005) (no due process rights to police protection).
247. 397 U.S. 254, 264 (1970).
248. *See* Merrill, *supra* note 30, at 919 (citing Bd. of Regents v. Roth, 408 U.S. 564, 572 (1972)).
249. *Roth*, 408 U.S. at 578.
250. *Id.* at 576–77.
251. *Id.* at 577.

action for false advertising does not implicate due process property because the purported right, which rested on the ability to compete for future customers, did not encompass a right to exclude others.[252] In contrast, business assets, including goodwill, are considered property for due process purposes because one has a right to exclude others from business goodwill by calling upon state authorities to protect the proprietor from extortion.[253]

Thus, the patterning definition of property for procedural due process purposes requires that a claimant possess "an entitlement having a monetary value that can be terminated only upon a finding that some specific condition has been satisfied."[254] This definition requires the claimant to have a recognizable legal right (perhaps something less than an irrevocable right) to exclude others from interfering with a property (small "p") interest of some sort. In this context, property means something of enduring value, exclusive or unique to the claimant. Unlike property for takings purposes, however, the due process patterning definition does not require a discrete, marketable asset.

3. Common Law Property

The concept of property under the common law is extremely broad. For purposes of property-based common law claims, at least one court has accepted a definition of property that "include[s] every species of estate, real and personal, and everything which one person can own and transfer to another."[255] In effect, then, under this definition common law property "extends to every species of right and interest capable of being enjoyed . . . upon which it is practicable to place a money value."[256]

More specifically, the property-based common law claim of conversion entails the unauthorized, "intentional exercise of dominion or control" over a thing in a manner that "seriously interferes with right of another to control it."[257] A conversion, in effect, repudiates the owner's right in a thing by denying or acting inconsistently with the owner's pos-

252. 527 U.S. 666, 672–74 (1999).

253. *See id.* at 675. *College Savings Bank* involved a substantive due process claim. *Id.* at 672–74. To protect against irrational or retroactive economic legislation or damages, Merrill's patterning definition for substantive due process reaches the broadest range of interests, *i.e.*, "everything relevant to calculating a person's material wealth or net worth." Merrill, *supra* note 30, at 982.

254. Merrill, *supra* note 30, at 961 (emphasis omitted).

255. Yuba River Power Co. v. Nevada Irrigation Dist., 279 P. 128, 129 (Cal. 1929) (internal quotation marks omitted); *see also In re* Albion Disposal, Inc., 152 B.R. 794, 807 (Bankr. W.D.N.Y. 1993) ("Any right that is not unlawful or against public policy, which has acquired a pecuniary value, becomes a property right entitled to protection.").

256. *Yuba River Power Co.*, 279 P. at 129 (internal quotation marks omitted).

257. RESTATEMENT (SECOND) OF TORTS § 222A (1965); *see* 18 AM. JUR. 2D *Conversion* § 1 (2004).

sessory interests.[258] Common elements of conversion are "(1) the plaintiff's ownership or right to possession of the property at the time of the conversion; (2) the defendant's conversion by a wrongful act or disposition of property rights; and (3) damages."[259]

There is little distinction between common law trespass, which also involves an offense against another's legally protected possessory rights, and conversion, which is an exercise of "hostile dominion [beyond] mere interference," over the thing in question.[260] "[A]ny interference with the [owner's possession or access to thing could be considered] an exercise of 'dominion,' [making] the difference between [trespass and conversion] a matter of degree."[261]

The relevant question for our purposes is whether the purported owner has a "legally protected interest" for purposes of a common law claim. In this context, the phrase legally protected interest means the existence of a possessory interest in a tangible or intangible thing protected by law from destruction.[262] Conversion or trespass claims can be asserted for interference with personal property[263] and fixtures[264] or natural resources severed from the real estate.[265] Other tangible things subject to conversion or trespass claims include timber,[266] gravel,[267] minerals,[268] and water.[269] Money can be the subject of conversion only when it can be identified by distinct marking or segregated.[270] Conversion claims can apply to intangible things as well, so long as the things in question are "specific and identifiable."[271] Examples of intangible things found to be property for conversion purposes include computer programs,[272] licenses to do business,[273] business names,[274] and Internet domain names.[275]

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258. *See* 18 AM. JUR. 2D *Conversion* § 1.

259. 90 AM. JUR. PROOF OF FACTS 3D *Proof of Landlord's Conversion of Tenant's Personal Property* § 3 (2006) (delineating elements for proof of a landlord's conversion of a tenant's personal property).

260. *See* RESTATEMENT (SECOND) OF TORTS § 222A cmt. a; *see also* 75 AM. JUR. 2D *Trespass* § 12 (2007) ("The important distinction between trespass to chattels and conversion lies in the measure of damages; in trespass, the plaintiff may recover for the diminished value of the chattel or one's interest in its possession and use, while in conversion, the measure of damages is the full value of the chattel, at the time and place of the tort.").

261. *See* RESTATEMENT (SECOND) OF TORTS § 222A cmt. a.

262. *See id.* § 927 cmt. a (1979).

263. *See, e.g.*, Peiser v. Mettler, 328 P.2d 953, 959 (Cal. 1958).

264. *See, e.g.*, Pick v. Fordyce Co-op Credit Ass'n, 408 N.W.2d 248, 255 (Neb. 1987).

265. *See, e.g.*, Collins v. Intervest, Inc., 418 So. 2d 1030, 1032 (Fla. Dist. Ct. App. 1982).

266. *See, e.g.*, Dollar v. McKinney, 103 So. 2d 785, 787 (Ala. 1958).

267. *See generally* R.W. Gascoyne, Annotation, *Earth, Sand, or Gravel as Subject of Conversion*, 84 A.L.R. 2D 790 (1962).

268. *See, e.g.*, Saddle Mountain Minerals, L.L.C. v. Joshi, 95 P.3d 1236, 1239 (Wash. 2004).

269. *See, e.g.*, Stites v. Duit Constr. Co., 992 P.2d 913, 914 (Okla. Civ. App. 1999).

270. *See, e.g.*, Macomber v. Travelers Prop. & Cas. Corp., 804 A.2d 180, 199 (Conn. 2002); Key Bank of N.Y. v. Grossi, 642 N.Y.S.2d 403, 405 (N.Y. App. Div. 1996).

271. *See* Taylor v. Powertel, Inc., 551 S.E.2d 765, 769–70 (Ga. Ct. App. 2001).

272. *See* 18 AM. JUR. 2D *Conversion* § 7 (2004).

Because a possessory interest in a thing is sufficient to maintain an action for conversion, when the right in question consists solely of a right to use a thing, as is the case with water, the requisite legal interest to bring a conversion claim against the interfering party should generally be found.[276] This is true even if the possessors do not have full legal title; so long as they lawfully exercise possession or control of the thing in question, their rights are sufficient for purposes of conversion.[277] Some courts have couched the action as a type of "quiet title" claim to personal property rather than conversion, but the effect appears to be the same.[278]

C. The Power of Metaphor: Trading the Bundle for a Web

For all its flaws, "the [bundle of rights] metaphor . . . unquestionably reigns supreme as [the] symbol . . . of property."[279] It has been employed by countless law professors to illustrate the nature of present and future interests in real property to first year students.[280] With Merrill's patterning definitions at hand, however, is there any need for metaphor? If the pat-

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273. *See id.*

274. *See id.*

275. *See id.* In contrast, interests in educational degrees are generally *not* considered property for purposes of distribution upon dissolution of marriage. *See, e.g.*, *In re* Marriage of Graham, 574 P.2d 75, 77 (Colo. 1977) ("An educational degree, such as an M.B.A., is simply not encompassed even by the broad views of the concept of 'property.'); Inman v. Inman, 648 S.W.2d 847, 850–52 (Ky. 1982) (agreeing that degrees are not marital property and citing multiple supporting cases); Petersen v. Petersen, 737 P.2d 237, 241–42 (Utah Ct. App. 1987) ("We agree with . . . *Graham* that an advanced degree . . . confers an intangible right [that] cannot . . . be characterized as property subject to [spousal] division.").

276. *See infra* Subpart V.C (arguing that a conversion claim should exist for an aggrieved water right holder).

277. *See* 18 AM. JUR. 2D *Conversion* § 5 (2004); *see also, e.g.*, *Ex parte* Anderson, 867 So.2d 1125, 1131–32 (Ala. 2003) (concluding that the possessory interest of a car owner's daughter and her husband was sufficient to maintain an action for conversion against a couple that had sold the car without permission, even though the daughter and her husband did not legally own the car); Madera Irrigation Dist. v. All Persons, 306 P.2d 886, 893 (Cal. 1957) (noting "that the members of an irrigation district are the beneficial owners of the water rights of the district[, which are held in trust by the district for its members, and thus] can demand [the] services to which they are entitled," *i.e.*, water delivery).

278. *See, e.g.*, Yuba River Power Co. v. Nev. Irrigation Dist., 279 P. 128, 128, 131 (Cal. 1929). The *Yuba River* court held that a person who has complied with the state Water Commission Act, "entitling [him] to receive preferential right to appropriate certain amounts of water[, may] bring an action in equity in the nature of a suit to quiet title [to property] to determine the adverse claims to . . . the water" brought by an upstream claimant. *Id.* It explained that, under the California Civil Code,

> [t]he term 'property' is sufficiently comprehensive to include every species of estate, real and personal, and everything which one person can own and transfer to another. It extends to every species of right and interest capable of being enjoyed as such upon which it is practicable to place a money value.

Id. at 129 (internal quotation marks omitted).

279. *See* Duncan, *supra* note 75, at 774. For theories on the origins of the metaphor, see WILLIAM M. WIECEK, THE LOST WORLD OF CLASSICAL LEGAL THOUGHT 186, n.81 (1998), and Penner, *supra* note 149, at 712–13.

280. *See* Madhavi Sunder, *IP*^{3}, 59 STAN. L. REV. 257, 317 (2006).

terning definitions fully serve the needs of property law as a distinct legal institution, embodying specific rules and definitions "designed to create and protect the value inherent in stable ownership of assets,"[281] arguably, a property metaphor serves no useful purpose. Merrill's approach not only provides clear guideposts for defining property, it also demonstrates that whether an interest in a thing is considered property can vary depending on context, without defeating rule of law objectives. But an appropriate metaphor can assist in evaluating the contextual backdrop of a property or property-like dispute. A metaphor that describes human relationships with a thing considered property, assisted by Merrill's patterning definitions, can be a powerful heuristic.

Legal positivists and realists express disdain for the use of metaphor, viewing it as a crude layperson's device rather than a sophisticated analytical tool. Jeremy Bentham provided the most graphic description of metaphor: a "'pestilence' . . . a 'syphilis, which . . . carries into every part of the system the principle of rottenness.'"[282] Lon Fuller argued that such analytical crutches should be used cautiously with full knowledge of their incompleteness, like "servants to be discharged as soon as they have fulfilled their functions."[283] Those who do find a place for metaphor relegate it to the lowly spot of a "temporary place-holder for more fully developed lines of argument."[284] Justice Cardozo, for example, warned that "[m]etaphors in law are to be narrowly watched, for starting as devices to liberate thought, they end often by enslaving it."[285]

It is certainly true that, "[o]nce [established,] metaphors become tenacious carriers of legal meaning,"[286] possibly allowing advocates to use them to obfuscate meaning and to manipulate rather than enlighten thought. Could it be, though, that the references to venereal disease and servitude indicate that the legal scholars' hostility to the use of metaphor is an expression of elitism and disdain for "lower" classes rather than a principled analytical critique?[287] Among "those who view law as a close relative of ordinary language, [the use of] metaphor is [commonly accepted as] a basic building block of . . . understanding" and problem-solving.[288] As such, the use of metaphor can strengthen prevailing rules and classifi-

281. Bell & Parchomovsky, *supra* note 58, at 615.
282. Robert L. Tsai, *Fire, Metaphor, and Constitutional Myth-Making*, 93 GEO. L.J. 181, 186 (2004) (quoting 1 JEREMY BENTHAM, WORKS at 235, V, at 92 (1843)).
283. *See* LON L. FULLER, LEGAL FICTIONS 121 (1967).
284. *See* Tsai, *supra* note 282, at 186.
285. Berkey v. Third Ave. Ry. Co., 155 N.E. 58, 58, 61 (N.Y. 1926).
286. Tsai, *supra* note 282, at 189.
287. *See* Eduardo M. Peñalver, *Property Metaphors and* Kelo v. New London*: Two Views of the Castle*, 74 FORDHAM L. REV. 2971, 2971 (2006).
288. *See* Tsai, *supra* note 282, at 182.

cations by infusing them with common experience through visual and often emotive terms.[289]

> At a basic level, . . . metaphors allow human beings to understand one phenomenon in relationship to another and to illuminate some salient details while shading others. In doing so, they order our social world by weaving new events into stock scenes and everyday occurrences.
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> . . . .
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> [They] trigger[] powerful, recurring frameworks of meaning and patterns of belief, and . . . set[] in motion deeply rooted folk images, archetypes, and story lines.[290]

Metaphor can serve as a powerful decision-making heuristic to ground-truth hypotheses about the application of existing rules to new or previously unexplored domains.[291] As such, the use of metaphor in legal reasoning is more likely to stimulate rather than constrain deliberation.[292] Just as importantly, metaphor nurtures a sense of community and promotes the rule of law "by linking lawyer to layman and ruling institution to citizen."[293]

Judges seem to find the use of metaphor irresistible, for good reason. Metaphor is a means of reaching the litigants, the advocates, and the broader public: "Metaphor is at once the first step in a complicated dance over institutional prerogative and legal meaning, the symbolic union of communitas and the democratic spirit, and the embodiment of our innermost hopes and fears as members of the American polity."[294]

More specifically, imagery and metaphor are important tools in property law.[295]

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289. *See id.* at 189-90.

290. *Id.* at 188-89.

291. *See* Jonathan H. Blavin & I. Glenn Cohen, *Gore, Gibson, and Goldsmith: The Evolution of Internet Metaphors in Law and Commentary*, 16 HARV. J.L. & TECH. 265, 266 (2002) ("[M]etaphors wield enormous power over thought and behavior. Some psychology and linguistic scholars have even asserted that all knowledge and understanding is metaphorical in nature.").

292. *See* Richard Delgado, *Mindset and Metaphor*, 103 HARV. L. REV. 1872, 1876 (1990); *see also* STEVEN L. WINTER, A CLEARING IN THE FOREST: LAW, LIFE AND MIND 21, 43-68 (2001) (describing "the irreducibly imaginative nature of reason," often expressed through metaphor); Vicki C. Jackson, *Constitutions as "Living Trees"? Comparative Constitutional Law and Interpretive Metaphors*, 75 FORDHAM L. REV. 921, 958 (2006) (noting the centrality of metaphor in constitutional legal analysis).

293. *See* Tsai, *supra* note 282, at 189.

294. *Id.* at 239.

295. *See* Arnold, *supra* note 24, at 341-42.

> A metaphor captures the imagination far more than a grand theory. With its power to energize the imagination, a new metaphor effectively challenges old ideas and stimulates new ones. . . . Thus, the metaphor, even in its simplicity, is not intended to be a "scary simplifier" but instead a linguistic and visual tool to aid in thinking about the thingness of property.[296]

The bundle of rights metaphor, however, has outlived its usefulness.[297] Not only does it, in our opinion, fail to serve as a well-calibrated mechanism to describe property rights in personal property and intangibles, it does even less to identify or describe interests in things that occupy the margins of property law, such as water rights.[298] True, viewing property as a "bundle of rights" can be useful in conceptualizing the sum total of rights one can have with respect to a parcel of land.[299] The symbol makes it easier to understand the concept of present and future estates, such as life estates and reversions, in relation to the bundle, that is, the fee simple absolute.[300] But it obfuscates the identification and distinct attributes of the specific thing over which ownership interests are asserted,[301] and makes us think only superficially about the myriad ways people relate to things, concentrating only on rights and not on responsibilities to other related interests and to the thing itself.[302] It is misleading and potentially destructive to employ a metaphor that views property as a one-dimensional, lifeless bundle.

In spite of its shortcomings, it would take much to dislodge the bundle metaphor from Supreme Court jurisprudence which consistently invokes it, particularly in takings cases. In *Lucas v. South Carolina Coastal Council*,[303] Justice Scalia drew upon "the 'bundle of rights'" acquired when a landowner takes title in finding that a restriction on coastal development effectuated a taking.[304] The Court engaged in its most creative use of the metaphor in *Palazzolo v. Rhode Island*,[305] where it concluded that prospective legislation could not redefine the property rights of landowners so as

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296. *Id.* (quoting Thomas C. Grey, *Freestanding Legal Pragmatism*, 18 CARDOZO L. REV. 21, 41 (1996)).
297. *See* Duncan, *supra* note 75, at 789.
298. *See id.* at 784–86
299. *See id.* at 774.
300. *See id.* at 775.
301. *See id.* at 803–04.
302. *Id.* at 804.
303. 505 U.S. 1003 (1992); *see also* Dolan v. City of Tigard, 512 U.S. 374, 393 (1994) (characterizing the "right to exclude others [a]s 'one of the most essential sticks in the bundle of rights'" (internal citation omitted)); Andrus v. Allard, 444 U.S. 51, 65–66 (1979) (concluding that impairment of one distinct strand in the bundle of rights is not a taking).
304. *See Lucas*, 505 U.S. at 1027.
305. 533 U.S. 606 (2001).

to preclude a takings challenge because "[t]he State may not put so potent a Hobbesian stick into the Lockean bundle."[306]

The only hope of displacing the bundle metaphor is to construct a compelling replacement with high symbolic appeal. Some have suggested reforming the bundle by inserting "green wood" into it[307] or tying the bundle with "the cord [of] public interest."[308] Neither approach goes far enough and both lack an essential component—the thing that is the subject of a property interest.

We agree with Tony Arnold that a web of interests is a more appropriate metaphor for property.[309] The web emphasizes the interrelatedness of things and people, and unlike the bundle, places the thing in question smack dab in the middle of the inquiry.[310] Placing the thing at the center is not meant to indicate that it is necessarily the most important part of the web; instead, it shows that all interest-holders have the thing in common.[311] Professor Arnold explains:

> Its centrality is one of commonality and context, not hierarchy and preoccupation. Seeing property as a web of interests can and should mean seeing the political, social, economic, and ethical aspects of property law, and the new metaphor should not be used to hide these aspects behind attention to an "objective" thing of ownership.
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> . . . .

306. *See id.* at 627. The Court explained that

> [j]ust as a prospective enactment, such as a new zoning ordinance, can limit the value of land without effecting a taking because it can be understood as reasonable by all concerned, other enactments are unreasonable and do not become less so through passage of time or title. Were we to accept the State's rule, the postenactment transfer of title would absolve the State of its obligation to defend any action restricting land use, no matter how extreme or unreasonable.

Id.

The *Palazzolo* Court ultimately concluded that a *Lucas*-type claim of "per se taking" for a deprivation of all economic use was precluded by the undisputed value of the unregulated portion of the tract of land at issue. *See id.* at 630–32.

307. *See* Robert J. Goldstein, *Green Wood in the Bundle of Sticks: Fitting Environmental Ethics and Ecology into Real Property Law*, 25 B.C. ENVTL. AFF. L. REV. 347, 403 (1998).

308. *See* Duncan, *supra* note 71, at 804.

309. *See* Arnold, *supra* note 22, at 340–342. Eric Freyfogle has used a web metaphor for property as well. *See* Freyfogle, *supra* note 201, at 1547.

310. *See* Arnold, *supra* note 22, at 340.

311. *See id.*

> [A]n understanding of property as a web of interests embraces the complexity, ambiguity, and constantly evolving nature of property law.[312]

The web metaphor is a more effective vehicle for infusing property rights with environmental and communal considerations while reflecting the complex interrelationships between people, society, and things than is an imagined collection of rights or sticks bound together in a wooden bundle.

Using a web as our metaphor for property has the added virtue of being a design "innovation inspired by nature."[313] The inherent physical characteristics of a web help illustrate the attributes of property. Spider webs are natural marvels. The remarkable attributes of spider silk make it "the 'Holy Grail' of biomaterials."[314] The qualities of a web are quite similar to humans' expectations about property: webs do not dry out or decay, and, like property, if sheltered, they can out-last their creators.[315] Some of the threads within the web are silky smooth while others are sticky,[316] just as some aspects of property are crystal clear while others are muddy or viscous.[317] Despite being extremely fine, filaments in a spider web are three times stronger than steel of the same diameter,[318] but at the same time, elastic enough to stretch up to forty percent of their length before breaking.[319] Similarly, people may create intangible but powerful emotional bonds with certain forms of property.[320]

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312. *Id.* at 340–42.

313. Kennedy, *supra* note 26 (internal quotation marks omitted). The use of nature as inspiration for design innovations is known as biomimetics or biomimicry. *See id.* A well-known example of applied biomimicry is the Wright brothers' use of bird wings in airplane design. *See id.* Nature as a design principle is currently used to explore a variety of innovations, including the development of various biomaterials (some utilizing principles learned from spider silk) and Nike products alike. *See id.*

314. *See id.*

315. *See* Bill Amos, *The Spiders Web Part I*, MICROSCOPY-UK.ORG.UK, http://www.microscopy-uk.org.uk/mag/indexmag.html?http://www.microscopy-uk.org.uk/mag/artnov98/baspid3.html (last visited Feb. 2, 2008).

316. *See id.*

317. *See generally* Carol M. Rose, *Crystals and Mud in Property Law*, 40 STAN. L. REV. 577 (1988).

318. *See* Kennedy, *supra* note 26.

319. *See* Wikipedia.org, Spider Silk, http://en.wikipedia.org/wiki/Spider_silk (last visited Feb. 2, 2008).

320. Just as humans use property for a variety of purposes, spiders use their their webs for a variety of purposes—for homes, to protect their offspring, to capture and consume other creatures, and to travel. *See id.* Humans have used spider silk for a variety of purposes, too. It was used by the ancient Greeks to dress wounds. *See* Audio tape: John H. Lienhard, Engines of our Ingenuity No. 1069: A Spider's Web (available at http://www.uh.edu/engines/epi1069.htm). Later, it was used and by indigenous people of the Pacific Rim and Asia for ornamentation, rain gear, and fishing lines. *See* Amos, *supra* note 315. Before synthetic fibers were invented, spider silk was indispensable for centering cross hairs in telescopes and gun sights and for measuring reticles in optical instruments. *See* Audio tape: John H. Lienhard, Engines of our Ingenuity No. 1069: A Spider's Web, *supra*.

Though no two webs are exactly alike, a few fundamental elements must be present for their formation. Each web consists of a firm webframe around a central hub of silk.[321] A structurally sound web must have both a dragline, to transport the spider and tie the web to a stable structural base, and a webframe to support and give form to the filaments.[322] Requirements at an even more basic level exist for these construction cornerstones—special protein-rich fibers.[323] The amino acids in the web-protein have a specific sequence and content that make the web-protein strong.[324] Just as webs must be composed of certain elemental building blocks, so too must interests in property be composed of certain key ingredients to be recognized as full property rights under the law (takings property)—durable interests in both the exclusive possession of and use of a discrete marketable asset.[325]

On a less tangible, yet perhaps more visceral level of examination, the web as a symbol stands for something more than what is seen or touched. Like human cognition and decision-making, and like relationships to a thing subject to property law, webs are more than just a collection of concentric and linear strands; each is composed of multiple nodes, or points of interaction, and multiple feedback loops.[326] Ecologically speaking, the nodes of a web serve as points of intersection or interaction, while the web connectors serve as pathways for positive or negative feedbacks.[327] In cognitive psychology, nodes and feedback loops, or pathways, form the semantic networks so fundamental to drawing analogies between familiar experiences and newly encountered things and experiences and drawing rational conclusions.[328] For the property web, these nodes and feedback loops extend to, from, and between interested persons, the community, and the thing.

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321. *See* Roxanna Watts, *My Garden Spider*, OUTSIDE IN ONLINE, May 2005, http://www.mdc.mo.gov/kids/out-in/2005/05/1.htm.

322. *See generally* Brent D. Opell, *Functional Similarities of Spider Webs with Diverse Architectures*, 148 AM. NATURALIST 630 (1996), *available at* http://simurl.com/vvv-ee-JJ.

323. *See* E-mail from Dr. Marcy Osgood, Assistant Professor, University of New Mexico School of Medicine, to Sandra Zellmer, Professor and Hevelone Research Chair, University of Nebraska College of Law (Nov. 10, 2007, 10:03) (on file with the Alabama Law Review). The main ingredients of silk fibers are proteins, and particular amino acids (cysteine and tyrosine, as well as glycine, alanine and proline) lend their specific and interacting properties to enable the silk fibroin protein to carry out its function perfectly. *See id.*; *see also* Kennedy, *supra* note 26.

324. *See* Kennedy, *supra* note 26. *See generally* J. M. Gosline et al., *The Mechanical Design of Spider Silks: From Fibroin Sequence to Mechanical Function*, 202 J. EXPERIMENTAL BIOLOGY 3295 (1999), *available at* http://jeb.biologists.org/cgi/reprint/202/23/3295.pdf.

325. *See supra* Subpart III.B.1.

326. E-mail from Dr. Marcy Osgood, *supra* note 323.

327. *See id.*

328. *See* ASHCRAFT, *supra* note 43, at 261; *see id.* at 335 (describing the role of "scripts," or "large-scale semantic and episodic knowledge structures that guide our interpretation and comprehension," in memory, activation, insight, and generalized understanding).

Scientists use the "web of life" as a metaphor for the interdependence of physical, psychological, and cultural phenomena.[329] This concept has challenged conventional views of evolution and the organization of living systems.[330] E.O. Wilson, perhaps more than any other, sparked the public's interest in biodiversity and the interconnectedness of life by emphasizing our "innate tendency to affiliate with, and draw deep satisfaction from, other organisms."[331]

Using the web as a metaphor for property illustrates that land, natural resources, and people are part of an interdependent system.[332] The owner's relationship with the thing forms a concentric circle, closest to the center of the web. Interests held by others, such as easements, liens, and future interests, and by the public, such as rights to water navigation and recreation, as well as use of fisheries, comprise other concentric circles in the web. For land and natural resources, ecological interests find a place in these circles as well. Societal norms, such as the public trust doctrine,[333] form the outermost webframe, surrounding both the human relationships and the thing itself.

Linear strands, representing the elemental incidents of property as clarified by Merrill's patterning definitions,[334] radiate in spokes from the center to the webframe. The strongest strand—the dragline of the web—reflects reasonable expectations to exclusive possession, use, and control of the thing, which in turn represents the very essence of property ownership.[335] If the dragline is removed or compromised, the web itself collapses and there is no property. This strand, like the other two necessary incidents of takings property—an irrevocable interest in a discrete asset—is moored in background principles of law.[336] For example, in a prior appropriation state, statutes, case decisions, beneficial use requirements, and

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329. *See* FRITJOF CAPRA, THE WEB OF LIFE 34–35 (1996); *see also* EDWARD O. WILSON, CONSILIENCE 4 (1998) (bringing together various branches of knowledge to encourage scholars to bridge the gap between science and the arts by recognizing a common goal: to give us "a conviction . . . that the world is orderly and can be explained by a small number of natural laws"); EDWARD O. WILSON, THE DIVERSITY OF LIFE 297–335 (1999) (emphasizing the need to familiarize ourselves with the complexity of the Earth's organisms and ecosystems).

330. *See* CAPRA, *supra* note 321, at 35.

331. *See* Fred Branfman, *Living in Shimmering Disequilibrium*, SALON.COM, Apr. 22, 2000, http://archive.salon.com/people/feature/2000/04/22/eowilson/print.html. Wilson asserts that consciousness is evolved both from material things and from the sacred, spirituality in each other and in the natural environment: "[T]o make sacred[] is . . . the end product of evolution . . . . It proceeds from mere preference and liking, to custom, to ritualization, to law . . . ." *Id.*

332. *See* Arnold, *supra* note 22, at 318–19.

333. *See generally* Jan S. Stevens, *The Public Trust: A Sovereign's Ancient Prerogative Becomes the People's Environmental Right*, 14 U.C. DAVIS L. REV. 195 (1980).

334. *See* Merrill, *supra* note 30, at 885, 952–60, 970–81.

335. *See* 63C AM. JUR. 2D *Property* §§ 1, 27 (1997).

336. *See supra* Subpart III.B.1 (identifying and defining the three elements of takings property).

transfer restrictions, all help define and situate the water right within the web.[337]

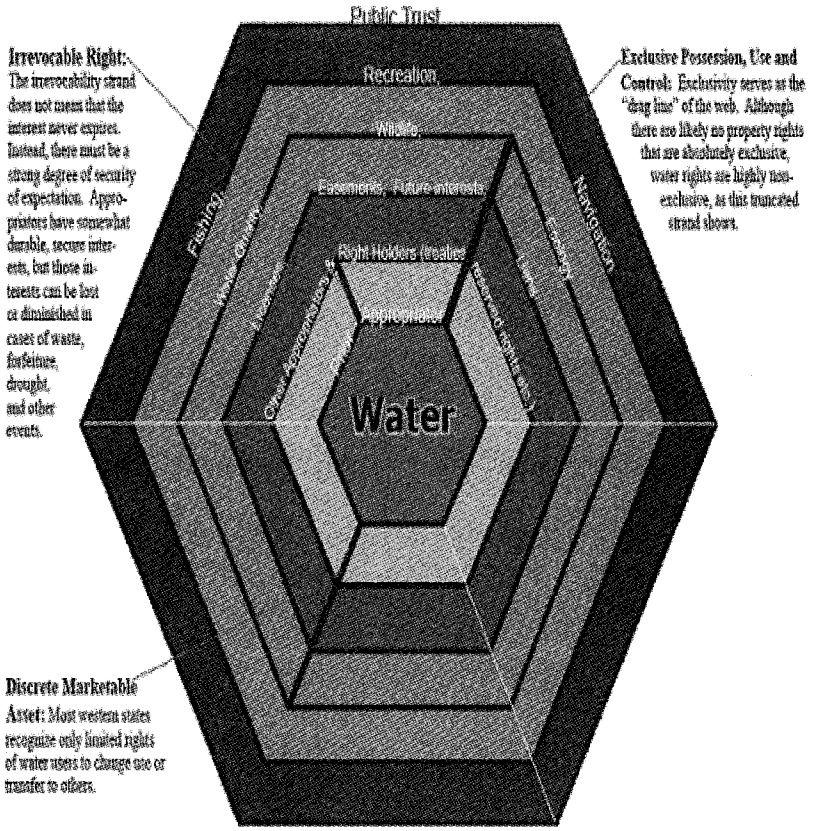

Figure 1. Web Representation of Bundled Water Rights

Just as the web's purpose is ultimately utilitarian, the metaphor must also be utilitarian as well as user-friendly. We have become used to looking at property bound in a bundle, tied exclusively to an owner or group of owners, where each stick or incident of property is easily separated from the rest.[338] The web shifts our focus from the owner and the incidents of property held by the owner to the thing and the relationships between

337. *See* Freyfogle, *supra* note 195, at 1540, 1545 (describing water rights as a "finely drawn puzzle of interconnected rights" situated in a "complex web of mutual dependencies"); *see also* Eric. T. Freyfogle, *Water Justice*, 1986 U. ILL. L. REV. 481, 506–06, 511.

338. *See* Gray, *supra* note 159, at 69.

owners and others and the thing. Ultimately, it is the thing that connects the owner and others, so the inclusion of actors or interests on the web is not indiscriminate. The individual owner is not ignored, just viewed in a broader context. Looking at property in this way, we are less concerned with which "sticks" from the bundle one actor can detach and wield against another than with identifying and making sense of connections between the actors and the thing that is subject to ownership.

The web vividly portrays the key attributes of property, helping us visualize and analyze the essential questions: Are all three requisite incidents of property present? What are the background norms and principles that moor the incidents of property? Perhaps most importantly, the web forces us to consider the nature of the thing itself, situated within the context of the particular property dispute.[339] Using water as an example, the web helps discern whether the specific interest in the specific body of water is a full property interest for purposes of a takings claim in the event of government regulatory curtailment or instead some other type of interest.

IV. PROPERTY, QUASI-PROPERTY, OR SOMETHING ELSE ENTIRELY

All sorts of things, tangible and intangible, have proven difficult to classify as property or non-property. Humans and their body parts[340] (including sperm[341] and embryos[342]) top the list, but pets,[343] art,[344] virtual real estate,[345] information,[346] cultural objects,[347] air,[348] and, of course, water[349] all pose challenges to the conventional concept of property. As new creations are invented and new situations encountered, this list of marginal cases—cases on the outer boundaries of property norms—will continue to

339. *See* Arnold, *supra* note 22, at 318, 320 ("Property rules with respect to land and natural resources must reflect the interconnectedness and interdependence of the natural world, including all forms of life. . . . [P]roperty law must affirm and enforce . . . [a] relationship of temporary stewardship: a relationship of trust, commitment, and responsibility with an awareness that future generations will take our place. Humans are part of the ecological community, and therefore have duties to nature or duties to the land—a land ethic, as Aldo Leopold described it—that can and should be an integral part of property concepts.").

340. *See infra* Subpart VI.B.

341. *See infra* notes 365–371.

342. *See, e.g.*, York v. Jones, 717 F. Supp. 421, 426–26 (E.D. Va. 1989).

343. *See* Lynn A. Epstein, *Resolving Confusion in Pet Owner Tort Cases: Recognizing Pets' Anthropomorphic Qualities Under a Property Classification*, 26 S. ILL. U. L.J. 31 (2001).

344. *See infra* Subpart VI.C.

345. *See* Steven J. Horowitz, Note, *Competing Lockean Claims to Virtual Property*, 20 HARV. J.L. & TECH. 443 (2007).

346. *See infra* Subpart VI.A.

347. *See* Adam Goldberg, Comment, *Reaffirming McClain: The National Stolen Property Act and the Abiding Trade in Looted Cultural Objects*, 53 UCLA. L. REV. 1031 (2006); *infra* Subpart VI.C.

348. *See* Robert P. Hagan, Comment, *Restaurants, Bars, and Workplaces, Lend Me Your Air: Smokefree Laws as Private Property Exactions—The Undisputed Country for* Nollan *and* Dolan, 22 J. CONTEMP. HEALTH L. & POL'Y 143 (2005); *infra* Subpart IV.D.

349. *See infra* Subpart V.

grow. Determining whether a property right exists in such cases can tell us a great deal about property itself.

While making no attempt to conduct a comprehensive survey of marginal or quasi-property cases, this Part takes a closer look at news, human bodies, art, and air in an effort to ground-truth the web metaphor and its patterning definitions, and to find helpful guideposts that may extend to water and other things. This assessment yields few direct parallels, but it does demonstrate that the nature of the thing in question is essential to treatment as property. It also supports the use of different patterning definitions for different types of claims by revealing that courts have had no qualms treating unique things as property in some contexts but not others.

A. News

The news was at the center of the first dispute to compel an in-depth assessment of the nature of property by the U.S. Supreme Court. In *International News Service v. Associated Press*,[350] the Court characterized news as "quasi property," enforceable as property between competitors but not as between the news collector and the general public.[351] The holding turned on whether the defendant had engaged in unfair competition, but the Court rationalized its decision to enjoin the competing press company by invoking the language of property.[352] In dicta, it stated that in a court of common law, something as evanescent as news could not be property yet, "in a court of equity, [news] has all the attributes of property necessary for determining that a misappropriation of it by a competitor is unfair competition."[353]

> [A]lthough we may and do assume that neither party has any remaining property interest as against the public in uncopyrighted news matter after the moment of its first publication, it by no means follows that there is no remaining property interest in it as between themselves. For, to both of them alike, news matter, however little susceptible of ownership or dominion in the absolute sense, is stock in trade, to be gathered at the cost of enterprise, organization, skill, labor, and money, and to be distributed and sold to those who will pay money for it, as for any other merchandise. . . . [W]e hardly can fail to recognize that for this purpose, and as between them, [the news] must be regarded as quasi

350. 248 U.S. 215 (1918).

351. *See id.* at 236; *see also* Penner, *supra* note 145, at 717 n.22 ("To treat this case in terms of property . . . is to treat the property right, like a copyright, as the exclusive right to publish for value the news one has oneself gathered, in other words, as a market monopoly.").

352. *See Int'l News Serv.*, 248 U.S. at 236–37.

353. *See id.* at 240.

property, irrespective of the rights of either as against the public.[354]

Penner criticizes the case for perpetuating the notion "that 'property' is no[thing but a] legal device that protects the owner's relation to [any]thing of value by enforcing the exclusion of others[;] . . . as such[, property law] may . . . be applied to anything whatsoever."[355] Penner says that the Court, by creating a "mystery substance [known as] 'quasi property,' . . . strip[ped] away [one of property's] few generally acknowledged attributes, [exclusivity] against all the world, not just against specified individuals."[356]

A look at the dispute through the lens of Merrill's patterning definitions indicates that the *International News* opinion does not necessarily miss the mark after all. Neither competitor had an irrevocable right to exclusive use of a discrete asset—current events compiled in news articles—for purposes of takings claims, but they each had some expectation in exclusive use as between competing news distributors.[357] Thus, both competitor's interests would likely rise to the level of due process property.

B. Body Parts

Most if not all state legislatures have recognized some limited form of rights, sometimes characterized as "quasi-property rights," in dead bodies and the organs and tissues of a decedent so that the decedent's estate or next-of-kin may control organ donation or other lawful forms of disposition.[358] Likewise, some courts recognize a legitimate claim of entitlement to possession of a decedent's remains for burial by affording the next-of-kin procedural due process protection.[359] The quasi-property concept does not extend so far as to allow claims for conversion, however, when a body was mishandled[360] or mistakenly cremated by the funeral home,[361] or

354. *Id.* at 236 (emphasis added).

355. *See* Penner, *supra* note 145, at 718.

356. *See id.* at 717.

357. *See Int'l News Serv.*, 248 U.S. at 238–41.

358. *See* Donna M. Gitter, *Ownership of Human Tissue: A Proposal for Federal Recognition of Human Research Participants' Property Rights in Their Biological Material*, 61 WASH. & LEE L. REV. 257, 276 n.80 (2004) ("[A]ll the states have enacted legislation that relies upon a quasi-property rights theory in permitting a decedent to *donate* his body after death for the purposes of transplantation, therapy, research, or education. . . . U.S. courts have recognized common law rights in the human body that are akin to property rights. For example, in certain circumstances a decedent's relatives possess 'property or quasi-property rights' in the decedent's body for the purpose of controlling the disposition of the body after death.").

359. *See, e.g.*, Brotherton v. Cleveland, 923 F.2d 477, 482 (6th Cir. 1991); Crocker v. Pleasant, 778 So.2d 978, 988 (Fla. 2001).

360. *See, e.g.*, Keyes v. Konkel, 78 N.W. 649, 649 (Mich. 1899).

361. *See, e.g.*, Culpepper v. Pearl St. Bldg. Inc., 877 P.2d 877, 882 (Colo. 1994).

where organs or tissues were used by researchers without consent.[362] Courts have flatly "reject[ed] the fictional theory that [exclusive or full] property right[s] exist[] in" bodies or body parts.[363] This reasoning is grounded on the fact that bodies and body parts are not discrete, commercially transferable assets, although they do in fact have tremendous monetary value for biomedical research and organ transplants.[364]

Reproductive material, specifically, gametes and embryos, have proven equally challenging, and courts have reached similar results. In *Hecht v. Superior Court*,[365] a decedent's girlfriend sued to recover vials of sperm deposited at a sperm bank.[366] The decedent's children wanted the sperm destroyed, but the girlfriend sought possession of it either as a gift from the decedent or as an asset of his estate.[367] The trial court ultimately accepted the latter theory, and awarded her a percentage of the sperm.[368] The California Court of Appeals agreed that the sperm was quasi-property for purposes of probate.[369] The court reasoned in a previous decision that under the state probate code, the decedent retained decision-making authority and had a sufficient ownership interest in his sperm at his death to constitute property, defined as "anything that may be the subject of ownership."[370] The court cautioned, however, that this interest was merely "decision-making authority" and not "true" property.[371]

A movement toward recognizing greater property rights for purposes of lawful disposition of body parts has gained momentum since *Moore v. Regents of the University of California*.[372] There, a patient asserted a property right in cells from his spleen in an action for conversion against researchers and biotech companies who had established and patented a valuable cell line from his tissue.[373] The court dismissed the claim,[374] citing the common law principle that "[o]nly property can be converted."[375] It failed

362. *See, e.g.*, Greenberg v. Miami Children's Hosp. Research Inst., 264 F. Supp. 2d 1064, 1074–76 (S.D. Fla. 2003).

363. *See Culpepper*, 877 P.2d at 882. The court reasoned that the measure of damages for conversion depends on the market value of the converted good, which, in a corpse, is unascertainable. *See id.* at 882 n.6.

364. *See* Remigius N. Nwabueze, *Biotechnology and the New Property Regime in Human Bodies and Body Parts*, 24 LOY. L.A. INT'L & COMP. L. REV. 19, 52–53 (2002) (arguing that, due to advances in biomedical technology, "substantial legal protection, analogous to the protection given to property, is now desirable").

365. 59 Cal. Rptr. 2d 222 (Cal. Ct. App. 1996) (depublished).

366. *See id.* at 223–24.

367. *See id.*

368. *See id.* at 224.

369. *See id.* at 226.

370. *See* Hecht v. Superior Court, 20 Cal. Rptr. 2d 275, 281 (Cal. Ct. App. 1993) (internal quotation marks omitted).

371. *Id.*

372. 793 P.2d 479, 510 (Cal. 1990).

373. *See id.* at 480–83.

374. *See id.* at 497.

375. *Id.* at 490.

to explain what constitutes property, but concluded that a state statute governing the disposal of human tissues and infectious waste "eliminates so many of the rights ordinarily attached to property that one cannot simply assume that what is left amounts to 'property' or 'ownership' for purposes of conversion law."[376]

Instrumentalist goals permeate the opinion, as evidenced by Justice Arabian's concurrence:

> Plaintiff has asked us to . . . regard the human vessel—the single most venerated and protected subject in any civilized society—as equal with the basest commercial commodity. . . .
>
> . . . .
>
> Does it uplift or degrade the "unique human persona" to treat human tissue as a fungible article of commerce? Would it advance or impede the human condition, spiritually or scientifically, by delivering the majestic force of the law behind plaintiff's claim?[377]

The dissenting opinion by Justice Mosk delved more deeply into the nature of property. Mosk took the position that, while a legal limitation or prohibition may diminish the rights that otherwise attach to property, what remains might still be a legally protected property interest of some sort.[378] "[P]roperty or title is a complex bundle of rights, duties, powers and immunities, [so] the pruning away of some or a great many of these elements does not entirely destroy the title."[379] Though couched in terms of sticks to be pruned, Mosk's assessment of property is largely consistent with a contextual approach guided by patterning definitions. He argued that conversion property exists, but it seems unlikely that he would take the next step and conclude that full takings property exists in the cells of a human body.[380]

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376. *See id.* at 491–92. The patient's tort claims for breach of fiduciary duty and lack of informed consent were allowed to go forward. *See id.* at 497.

377. *Id.* at 497–98 (Arabian, J., concurring). For in-depth critique of the opinion's approach to property, see Gitter, *supra* note 358, at 270–78, and Penner, *supra* note 145, at 718–22. For an opinion accepting the approach, see Washington University v. Catalona, 437 F. Supp. 2d 985, 997 (E.D. Mo. 2006), agreeing that research participants "had parted with any semblance of ownership rights once their biological materials had been excised for medical research."

378. *Moore*, 793 P.2d at 509–10 (Mosk, J., dissenting).

379. *Id.* at 510 (internal citation omitted).

380. *See id.* at 518.

C. Culturally Significant Artwork

According to the United Nations Educational, Scientific, and Cultural Organization (UNESCO), "cultural property [is] one of the basic elements of civilization."[381] Its exchange "increases the knowledge of . . . civilization . . . , enriches the cultural life of all peoples and inspires mutual respect and appreciation among nations."[382] Cultural property "include[s] historic structures and artifacts as well as natural landscapes . . . and objects with spiritual or other intangible human associations,"[383] art,[384] and arguably music. A determination of cultural significance is a controversial undertaking best left to anthropologists and community members themselves rather than to lawyers. The term "culture" is itself a deeply complex concept, and one of the authors has previously used the term in "reference to a particular way of life by and through which a group of people brought together by common characteristics, such as ethnicity, religion, language, or history, express shared behaviors and values."[385] For purposes of this Article, we consider only those works of visual art for which some consensus can be reached with respect to their enduring public value.

Although a Rembrandt painting, a Michelangelo sculpture, and a Diego Rivera mural can each be privately held, cultural norms in many nations of the world allocate some degree of access to the public, or at least prevent willful destruction of the artwork.[386] In other words, public access or artistic rights are deemed as important as the rights of the private holder.[387] Cultural norms discourage private owners from using their Rembrandt painting as a dartboard or otherwise destroying it, and from exercising unfettered power of exclusion over it because the activity comes at such a high cost to human history and cultural meaning.[388] The Convention

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381. Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property, Nov. 14, 1970, 823 U.N.T.S. 231 [hereinafter Convention on Cultural Property].

382. *Id.*; *see also* UNIDROIT Convention on Stolen or Illegally Exported Cultural Objects, June 24, 1995, 34 I.L.M. 1330 (noting "the fundamental importance of the protection of cultural heritage and of cultural exchanges for promoting understanding between peoples, and the dissemination of culture for the well-being of humanity and the progress of civilisation."); John Henry Merryman, *The Public Interest in Cultural Property*, 77 CAL. L. REV. 339, 348 (1989) ("Life may be short, but art is long. The object that endures is humanity's mark on eternity.").

383. *See* Sandra B. Zellmer, *Sustaining Geographies of Hope: Cultural Resources on Public Lands*, 73 U. COLO. L. REV. 413, 414 (2002).

384. *See, e.g.*, Merryman, *supra* note 382, at 349 (describing a painting as a cultural object).

385. *See* Zellmer, *supra* note 383, at 414–15 & n.4.

386. *See* JOSEPH L. SAX, PLAYING DARTS WITH A REMBRANDT: PUBLIC AND PRIVATE RIGHTS IN CULTURAL TREASURES 21–34 (1999).

387. *See id.* at 22.

388. *See id.* at 1–2; *see also* Monroe E. Price, *State Arts Councils: Some Items for a New Agenda*, 27 HASTINGS L.J. 1183, 1188 (1976) ("[T]raditional European concepts require that ownership of a Rembrandt does not include a right to deface the painting.").

for the Protection of Cultural Property in the Event of Armed Conflict safeguards art and other forms of cultural property from willful destruction during war.[389] Meanwhile, various international conventions highlight the need to protect art and other forms of cultural property from theft and unlawful exportation.[390] And, for example, domestic legislation in England and Japan protects medieval structures from destruction, restricts the exportation of famous artwork, and seeks to preserve cultural properties.[391]

United States law identifies historic structures, objects of antiquity, and other cultural objects as expressions of a "collective public heritage."[392] Federal legislation protects the moral rights of artists in certain cases, but fails to provide direct protection for the artwork itself.[393] The Visual Artists Rights Act of 1990 enables artists to protect paintings, drawings, prints, or sculptures of "recognized stature" against modification or destruction.[394] The public interest in the preservation of art is advanced, however, only if the artist is willing to pursue protection.[395] By contrast, the California Preservation of Cultural and Artistic Creations Act allows a cause of action to prevent destruction through "third-party intervention by . . . organizations acting [in the] public interest."[396]

The various domestic provisions and conventions reflect international customary law, which gives culturally significant artwork a hybrid stature that blurs the line "between public and private" property.[397] The right to exclude and the right to dispose of the art may be greatly restricted or even curtailed through government regulation.[398] No doubt, a Rembrandt is a discrete asset of great value and owners can expect to maintain possessory rights to enjoy it, to sell it, and to pass it on through inheritance, but owners have no reasonable expectation of complete exclusivity or unfettered disposition.[399] The elemental strand in the web of interests—

389. *See* Convention for the Protection of Cultural Property in the Event of Armed Conflict, May 14, 1954, 249 U.N.T.S. 240.

390. *See, e.g.*, UNIDROIT Convention on Stolen or Illegally Exported Cultural Objects, *supra* note 382; Convention on Cultural Property, *supra* note 381, at 232.

391. *See* Nicole B. Wilkes, *Public Responsibilities of Private Owners of Cultural Property: Toward a National Art Preservation Statute*, 24 COLUM.-VLA J.L. & ARTS 177, 202 (2001).

392. *See id.* at 178–79. For an assessment of legal treatment of historic properties and sacred sites, see generally Zellmer, *supra* note 383.

393. *See* 17 U.S.C. § 106(a) (2000). Professor Rob Denicola brought this provision, and related provisions of the Visual Artists Rights Act of 1990 (VARA), to my attention.

394. *Id.* § 106A(a)(3). *See generally* Carter v. Helmsley-Spear, Inc., 71 F.3d 77, 77–88 (2d. Cir. 1995) (discussing the Visual Artists Rights Act).

395. *See* Wilkes, *supra* note 391, at 192. Wilkes argues that "[t]he public trust doctrine . . . could be extended to safeguard art objects that are subjected to extensive public use." *Id.* at 195.

396. *See id.* at 192 n.128.

397. *See id.* at 179; *see also* Marilyn E. Phelan, *The UNIDROIT Convention on Stolen or Illegally Exported Cultural Objects Confirms a Separate Property Status for Cultural Treasures*, 5 VILL. SPORTS & ENT. L.J. 31, 45 (1998).

398. *See* Wilkes, *supra* note 391, at 188–92.

399. *See id.* at 195–98.

exclusivity—is severely compromised. If a government, acting for the benefit of the public interest in preservation of culturally significant art, prevents destruction or mutilation of the art, a takings claim should be dismissed. The owner cannot be forced to provide access to the public at any time, place, or manner, however, and as between two competing private claims to the art, the owners' property rights are substantial.[400] Thus, the owner may maintain rights to possess, enjoy, and derive value from the art to the exclusion of competing private interests, but the exclusivity strand is relatively weak.

D. Air

Like water, the law once treated air as both "so plentiful and so difficult to reduce to property that [it was] left open to the [general] public."[401] Clean air appeared to be an inexhaustible, "costlessly obtained asset,"[402] making it "pointless to the point of absurdity [to recognize] property rights in air."[403] "As it turns out, however, air is neither infinitely available nor always costlessly obtained."[404] If a power company constructs a large coal-fired, pollution-emitting power plant in the neighborhood, those "who live[] nearby may find [that clean] air is no longer . . . freely available."[405] As with water, scarcity breeds appreciation. To recover what was lost, an adversely affected neighbor might sue the power company under a common law theory, such as nuisance, to protect the right to peaceful use and enjoyment of her real property interest.[406] If successful, the company will have to pay for damages to affected crops and livestock, and it may even have to install expensive equipment to control the pollution or face an outright injunction of operations.[407]

Clean air has aspects of both a private and a public good,[408] where consumptive uses are generally non-rivalrous and benefits of use are generally non-excludable.[409] Under the 1990 amendments to the federal Clean

400. *See id.* at 193–95.
401. *See* Rose, *supra* note 78, at 717–18.
402. *See* Bell & Parchomovsky, *supra* note 58, at 577–78.
403. *See id.* at 578.
404. *Id.*
405. *See id.*
406. *See id.* at 602–03.
407. *See* 58 AM. JUR. 2D *Nuisances* § 218 (2002). Note that, if the complaining party is not a landowner, but simply recreates in a nearby public park, it will have a tough time having its interests redressed under a nuisance theory. *Id.* § 45.
408. *See* Carol M. Rose, *The Several Futures of Property: Of Cyberspace and Folk Tales, Emission Trades and Ecosystems*, 83 MINN. L. REV. 129, 179 (1998).
409. *See* Bell & Parchovsky, *supra* note 58, at 577–78 ("Nonrivalrous consumption means that consumption of the good by one person does not rival consumption by another. . . . Nonexcludability refers to the inability of the good's owner to exclude consumers. The result of these two features of public goods creates the need for government provision; that is, other than altruists, private persons would provide only those goods from which they could enjoy sufficient benefits to warrant the provi-

Air Act, "the air has been privatized [to a certain degree], insofar as pollution rights are granted (and even bought and sold) by permit."[410] Although there is no irrevocable right to exclusive possession, limited property rights in clean air or in using the air for waste disposal purposes may be recognized for purposes of due process, statutory entitlements, or common law claims.

V. INTERESTS IN WATER AS PROPERTY

Courts and commentators alike are split regarding the treatment of interests in water as takings property or as a quintessential public resource.[411] The accuracy of either position turns on the context of the dispute, the underlying constitutional and statutory provisions of state law, the case law of the jurisdiction in question, and any applicable contractual terms that define the user's interest in water.[412] As such, it is not plausible to assert that interests in water should always be treated as private property or, conversely, that they should never be.[413] This Part shows that, in the majority of prior appropriation jurisdictions, interests in water can be considered due process property or common law property but not regulatory takings property.

A. Regulatory Takings Property

The generally applicable test for determining whether a regulatory taking has occurred is whether a governmental regulation goes "too far" in impacting private property.[414] Once a private property right is found to have been affected, courts employ a balancing test that considers the effects of the regulation on reasonable investment-backed expectations.[415] In rare cases where a regulatory action causes a physical invasion of the property or denies all economically beneficial use, however, the balancing test is not applied; rather, a per se taking will be found.[416] That is, com-

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sion.").

410. *See* Rose, *supra* note 78, at 718 n.29. The new source review program also stimulates the trade of property-like units of air pollution through a program that allows facilities to "bubble" their emissions to stay below certain emission thresholds. *See* Richard B. Stewart, *Economics, Environment, and the Limits of Legal Control*, 9 HARV. ENVTL. L. REV. 1, 14 (1985).

411. *See, e.g.*, Melinda Harm Benson, *The* Tulare *Case: Water Rights, The Endangered Species Act, and the Fifth Amendment*, 32 ENVTL. L. 551, 571 (2002); Gray, *supra* note 159, at 27.

412. *See* Gray, *supra* note 159, at 26.

413. *See id.* at 11–12 ("The unique characteristics of the property right in water thus add layers of complexity to the analysis of water rights takings cases that go far beyond takings cases involving land or other types of property.").

414. *See* Pa. Coal Co. v. Mahon, 260 U.S. 393, 415 (1922).

415. *See* Penn Cent. Transp. Co. v. City of New York, 438 U.S. 104, 123–24 (1978).

416. *See, e.g.*, Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1019 (1992); Loretto v. Teleprompter Manhattan CATV Corp., 458 U.S. 419, 426 (1982).

pensation must be paid unless the interest in question was already limited by a background principle of law that inheres in the claimant's title.[417]

Water users who allege a taking of their interests in water bear a heavy burden of establishing compensable property rights.[418] In most cases, they will not be able to meet this burden because the law of nearly every state gives "broad . . . regulatory powers [to] the government [to restrict an appropriator's rights to use water where necessary] to protect endangered species, water quality, and other environmental interests."[419]

We realize that this assertion contravenes conventional wisdom. The prior appropriation regime, as described above, is an expedient means of determining who gets water, how much she gets, and when she gets it.[420] Like various forms of private property, the protection of senior water rights in the western United States is necessary to ensure stability and protect the value of reasonable expectations in continued use. The Nebraska Supreme Court has described the system of distributing water according to appropriators'

> respective priorities [as] undoubtedly enacted in furtherance of a wise public policy to afford an economical and speedy remedy to those whose rights are wrongfully disregarded by others, as well as to prevent waste, and to avoid unseemly controversies that may occur where many persons are entitled to share in a limited supply of public water.[421]

Private rights to use surface water are ensconced in state constitutions[422] and statutes[423] throughout the western states. Colorado, in particular, boasts strong property rights in water. The Colorado constitution states that "[t]he right to divert the unappropriated waters of any natural stream to beneficial uses shall never be denied."[424] Yet another provision of that state's constitution provides that water is "the property of the public, and the same is dedicated to the use of the people of the state, *subject to appropriation*."[425] Colorado courts have interpreted these provisions to mean that water rights are vested property rights.[426] As a result, Colorado

417. *See Lucas*, 505 U.S. at 1029.
418. *See* Gray, *supra* note 159, at 12–13.
419. *See id.* at 26.
420. *See supra* Subpart II.B.
421. Enterprise Irrigation Dist. v. Willis, 284 N.W. 326, 329 (Neb. 1939).
422. *See, e.g.*, COLO. CONST. art. XVI, § 6; NEB. CONST. art. XV, § 6.
423. *See, e.g.*, CAL. WATER CODE § 1011.5 (West 2004); COLO. REV. STAT. ANN. § 37-92-102 (West 2004).
424. COLO. CONST. art. XVI, § 6
425. *Id.* § 5 (emphasis added).
426. *See, e.g.*, Pub. Serv. Co. v. Meadow Island Ditch Co. No. 2, 132 P.3d 333, 340 (Colo. 2006); Ackerman v. City of Walsenburg, 467 P.2d 267, 270 (Colo. 1970); Brighton Ditch Co. v. City of Englewood, 237 P.2d 116, 120 (Colo. 1951). *See generally* Justice Gregory J. Hobbs, Jr., *Colora-*

boasts a relatively active water market.[427] Indeed, according to the state Supreme Court, "[Colorado's] future well-being likely depends on continued transfers of appropriated agricultural water to other uses at other places," given the state's rapidly growing urban population and the over-appropriated status of most of its major river basins.[428]

In Colorado, providing stability and securing expectations in continued use have prevailed as a matter of law and public policy,[429] and water rights are firmly grounded on property law theories.[430] The public trust doctrine has limited import, and water rights are granted and can be transferred with no regard for the general public interest, so long as other appropriators are not harmed by the transfer.[431] Accordingly, in Colorado, so long as the use in question meets the state law requirements for continuing beneficial use, appropriators' claims for compensation for governmental restrictions that go "too far" are likely to avoid dismissal.[432]

Colorado is an anomaly among western states. Most other western states embrace the public trust doctrine to at least some degree[433] and impose a public interest test on water transfers.[434] Nebraska's constitution, for example, may seem somewhat similar to Colorado's, but it contains an important distinction: "The right to divert unappropriated waters of every natural stream for beneficial use shall never be denied *except when such denial is demanded by the public interest.*"[435] This language authorizes the state legislature to define through statute what constitutes the "public interest."[436] Statutes require public interest review for both new appropria-

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do Water Law: An Historical Overview, 1 U. DENV. WATER L. REV. 1 (1997).

427. *See* Tom Kuhnle, Note, *The Federal Income Tax Implications of Water Transfers*, 47 Stan. L. Rev. 533, 540 (1995); Jedidiah Brewer, Robert Glennon, Alan Ker & Gary Libecap, *Transferring Water in the American West: 1987-2005*, 40 U. MICH. J.L. REFORM 1021, 1043 (2007).

428. *See* High Plains A & M, LLC v. Se. Colo. Water Conservancy Dist., 120 P.3d 710, 721-22 (Colo. 2005). "Colorado has grown from two million residents in 1970 to 4.6 million today, with an additional 2.5 million expected by 2030. . . . Much of this growth has been made possible by a steady change of water rights from agriculture to municipal use." *Id.* at 722.

429. *See* Hobbs, *supra* note 426, at 2.

430. *See* Lawrence J. MacDonnell, *Public Water—Private Water: Anti-Speculation, Water Reallocation, and* High Plains A&M, LLC v. Southeastern Colorado Water Conservancy District, 10 U. DENV. WATER L. REV. 1, 5 (2006) (noting that, in Colorado, "[w]ater in the possession of an appropriator [is considered] 'personal property'").

431. *See id.* at 6.

432. *See* Pa. Coal Co. v. Mahon, 260 U.S. 393, 415; *see also supra* Subpart III.B.1 (describing essential elements of takings property).

433. *See* Carol Necole Brown, *Drinking From A Deep Well: The Public Trust Doctrine And Western Water Law*, 34 FLA. ST. U. L. REV. 1, 10-11 (2006); Wilkinson, *supra* note 84, at 466.

434. *See* Grant, *supra* note 111, at 486 ("Scrutiny of proposed water uses for conformity with the public interest is common practice in the West. All but two . . . western states require public interest review of new appropriations. More than half of these states require review in order to transfer existing appropriations to new uses.").

435. NEB. CONST. art. XV, § 6 (emphasis added).

436. *See* Cent. Platte Natural Res. Dist. v. City of Fremont, 549 N.W.2d 112, 117 (Neb. 1996); *In re* Applications A-16027, 495 N.W.2d 23, 31-34 (Neb. 1993); *In re* Application A-16642, 463 N.W.2d 591, 604-05 (Neb. 1990); *see also* NEB. REV. STAT. § 46-234 (2004) ("An application [for a

tions and changes in use or transfers to other users, and wasteful uses or non-use for five years or more can result in cancellation or forfeiture.[437] Changes in use tend to be discouraged.[438] As a result, transfers are relatively rare, and those that do occur typically involve small-scale transactions between users with similar activities at the same or nearby locations.[439]

In its 2005 opinion in *Spear T Ranch, Inc. v. Knaub* ("*Spear T Ranch I*"),[440] the Nebraska Supreme Court summed up the state's water law provisions: "[a] right to appropriate surface water . . . *is not an ownership of property.*"[441] As unequivocal as this sounds, the court tempered its statement in the next line: "Instead, the water is viewed as a public want and the appropriation is a right to use the water."[442] One might view this as a distinction without a difference because rights to water have always been recognized as usufructuary—a right to use but not outright ownership in the corpus of the water *in situ*.[443] Given the usufructuary and public nature of water rights, however, any expectation of exclusive, unfettered use in a state like Nebraska, which is typical of most other western states, is patently unrealistic.[444] At least two elements of the patterning definition for takings property are missing or severely compromised—exclusive possession and a discrete, marketable asset.[445] The third element—an irrevocable interest—is also compromised because appropriative rights can be forfeited or canceled for non-use or waste.[446]

The distinction between ownership of water and a mere right to use water made a tremendous difference to the *Spear T Ranch I* plaintiff, "a surface water appropriator" harmed by groundwater pumping.[447] The court

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water appropriation] may . . . be refused . . . when denial is demanded by the public interest."); *id.* § 46-289 (stating that the Director of Natural Resources may consider certain specified factors when determining whether "an interbasin transfer [is in] the public interest").

437. *See* NEB. REV. STAT. § 46-229 (specifying that water rights are forfeited if not used for a consecutive five-year period).

438. *See id.* § 46-294; NEB. CONST. art. XV, § 6.

439. *See* WATER TRANSFERS IN THE WEST, *supra* note 106, at 18–25; ; Sandra Zellmer, *The Anti-Speculation Doctrine and its Implications for Collaborative Water Management*, 7 NEV. L.J. (forthcoming 2008) Because of the uniqueness of water and potential third-party effects, "water markets [simply] cannot be expected to resemble more conventional markets." *See* Sax, *supra* note 79, at 13.

440. 691 N.W.2d 116 (Neb. 2005).

441. *Id.* at 127 (emphasis added).

442. *Id.*

443. *See* Richard S. Harnsberger et al., *Interstate Transfers of Water: State Options after* Sporhase, 70 NEB. L. REV. 754, 787 & n.139 (1991).

444. *See* Eric Pearson, *Constitutional Restraints on Water Diversions in Nebraska: The* Little Blue *Controversy*, 16 CREIGHTON L. REV. 695, 707–08 (1983).

445. *See supra* Subpart III.B.1 (identifying and defining the three elements of takings property).

446. *See supra* note 433 and accompanying text; *see also In re* Guadalupe River Basin, 642 S.W.2d 438, 444–45 (Tex. 1982) (holding that limiting riparian rights to the maximum amount of water beneficially used is not a taking because non-use is equivalent to waste and there is no right to waste water); Dep't of Ecology v. Abbott, 694 P.2d 1071, 1077 (Wash. 1985).

447. *See Spear T Ranch I*, 691 N.W.2d at 124.

rejected Spear T's attempt to protect its "property" under a theory of conversion (an act of dominion wrongfully asserted over another's property), and left Spear T to tort remedies.[448] Without further analysis, in its subsequent opinion in *Spear T Ranch II*,[449] the court likewise dismissed Spear T's claim against the Department of Natural Resources for a regulatory taking of property under the Nebraska Constitution, stating simply that Spear T had no property to be taken.[450]

The result in *Spear T Ranch II* would be the same if the patterning definition were applied. In fact, several other state courts have rejected regulatory takings claims for the infringement of appropriative rights, either because "[n]o one has any property in the water itself, but a simple usufruct,"[451] or because there is no vested right in non-use or waste.[452]

In rejecting the appropriator's conversion claim, however, the court's opinion in *Spear T Ranch I* is problematic on several levels. In *Spear T Ranch I,* the court cited only groundwater-related precedent in holding that the appropriator had no common law property interest in surface water.[453] In Nebraska, groundwater is governed by a separate statutory provision, which specifies that groundwater is a public resource for which only reasonable, correlative uses on overlying land are allowed.[454] Nebraska courts have consistently held that groundwater is not subject to private ownership; rather, it is owned by the state for the benefit of the public.[455] Indeed, "Nebraska law has never considered ground water to be a market item freely transferable for value among private parties."[456]

In contrast, previous surface water cases had concluded that surface water appropriators who complied with statutory requirements did in fact possess vested property rights.[457] In 1952, the Nebraska Supreme Court in *City of Scottsbluff v. Winters Creek Canal Co.*[458] invalidated an ordinance

448. *See id.* at 127. For commentary, see J. David Aiken, *Hydrologically-Connected Ground Water, Section 858, and the* Spear T Ranch *Decision*, 84 NEB. L. REV. 962 (2006), and Donald Blankenau et al., Spear T Ranch v. Knaub*: The Reincarnation of Riparianism in Nebraska Water Law*, 38 CREIGHTON L. REV. 1203 (2005).

449. Spear T Ranch, Inc. v. Neb. Dep't of Natural Res., 699 N.W.2d 379 (Neb. 2005).

450. *See id.* at 386 ("Because Spear T had no property that was damaged or taken by the Department, Spear T could not assert a cause of action for inverse condemnation."). The court also concluded that the state had no authority, much less a duty, "to regulate ground water users or administer ground water rights for the benefit of surface water appropriators." *Id.*

451. *See In re* Hood River, 227 P. 1065, 1087 (Or. 1924).

452. *See In re* Guadalupe River Basin, 642 S.W.2d 438, 444–45 (Tex. 1982); Dep't of Ecology v. Abbott, 694 P.2d 1071, 1077 (Wash. 1985).

453. *See Spear T Ranch I*, 691 N.W.2d at 127.

454. *See* NEB. REV. STAT. § 46-702 (2004).

455. *See, e.g., In re* Application U-2, 413 N.W.2d 290, 298 (Neb. 1987); Douglas v. Sporhase, 305 N.W.2d 614, 616 (Neb. 1981), *rev'd*, 458 U.S. 941 (1982).

456. *Sporhase*, 305 N.W.2d at 616.

457. *See* Joseph A. Kishiyama, Note, *The Prophecy of Poor Dick: The Nebraska Supreme Court Recognizes a Surface Water Appropriator's Claim Against a Hydrologically Connected Ground Water User in* Spear T Ranch, Inc. v. Knaub, 85 NEB. L. REV. 284, 285, 295–96 n.83 (2006).

458. 53 N.W.2d 543 (Neb. 1952).

that deemed open canals to be "public nuisances," requiring owners to fill them or construct water pipes.[459] The court found that the ordinance was an arbitrary exercise of the police power,[460] and opined in dicta that it would result in "confiscation of the company's property without due process or payment of just compensation."[461]

The issue of surface water appropriation was addressed directly in *Enterprise Irrigation District v. Willis*.[462] There, the court held that a statute that limited appropriations to three acre-feet per acre was not intended to apply retroactively.[463] It conceded that the state may control the distribution of water to ensure beneficial use and guard against waste by virtue of its police power,[464] but concluded that the statutory limitation could not be applied to an appropriation that vested prior to enactment.[465] "That an appropriator of public water, who has complied with existing statutory requirements, obtains a vested property right has been announced by this court on many occasions."[466] The court continued that the state's police power had never been expanded so far as to allow the legislature "to destroy vested rights in private property when such rights are being exercised and such property is being employed in the useful and in nowise harmful production of wealth [unless use of the property is] inimical to public health or morals or to the general welfare."[467] These two cases support the conclusion that an appropriator's interest in surface water can be property for the purposes of at least some types of claims.

Likewise, in Nebraska,[468] and other western states,[469] compensation has been required for the outright condemnation of surface water rights. These results could be justified, perhaps, by considering the disparate purposes and history of eminent domain powers. Prior to *Pennsylvania Coal Co. v. Mahon*,[470] no compensation was required for regulations that protected public health, morals, or general welfare so long as the regulations were authorized by the police power, no matter how much the regulations affected the value of private property.[471] For eminent domain purposes, an "owner" typically encompasses any person having "an estate, title, or interest, including beneficial, possessory, and security interest, in a prop-

459. *See id.* at 545-46, 551.
460. *See id.* at 549-50.
461. *See id.* at 547.
462. 284 N.W. 326, 329 (Neb. 1939).
463. *See id.* at 329-31.
464. *See id.* at 330.
465. *See id.* at 331.
466. *Id.* at 329.
467. *Id.* at 330 (internal citation omitted).
468. *See, e.g.*, Loup River Pub. Power Dist. v. North Loup River Pub. Power & Irrigation Dist., 5 N.W.2d 240 (Neb. 1942).
469. *See, e.g.*, Sullivan v. City of Ulysses, 932 P.2d 456, 460 (Kan. 1997).
470. 260 U.S. 393 (1922).
471. *See* Treanor, *supra* note 200, at 797.

erty sought to be condemned," and property, in turn, includes all "land, buildings, structures, tenements, hereditaments, easements, tangible and intangible property, and property rights whether real, personal, or mixed, including fluid mineral and gas rights."[472] In modern eminent domain cases, however, challengers typically focus on valuation of the property or, more fundamentally, whether condemnation has been for a public purpose, not whether property is in fact concerned.[473]

Perhaps *Spear T Ranch I*[474] evidences an evolution in the law to reflect modern social values, or perhaps the opinion is simply a more reasoned application of the long-standing notion that water is "a public want."[475] Whether an emerging trend in the law is a deviation from or merely a reflection of background principles of property law is an issue often raised in regulatory takings discussions.[476] In *United States v. Rands*,[477] the Supreme Court concluded that landowners adjacent to the Columbia River had no property rights as against the United States in anything subject to the navigational servitude, including the flow of the water in the river, access to the water, and other values attributable to proximity to water.[478] "[T]hese rights and values are not assertable against the superior rights of the United States, [and] are not property within the meaning of the Fifth Amendment."[479]

Outside of the navigational servitude context, the federal courts have been wildly inconsistent regarding takings claims brought by appropriators with state-sanctioned water rights. In one case involving the use of water on a federal grazing allotment, the Court of Federal Claims found that there was no property right in the grazing permit itself, but remanded for a resolution of whether the claimant had satisfied state and federal requirements for a vested property right in the water.[480]

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472. Uniform Condemnation Procedures Act, MICH. COMP. LAWS ANN. §§ 213.51(f), 213.51(i) (West 1998); *see also* ELLEN FRANKEL PAUL, PROPERTY RIGHTS AND EMINENT DOMAIN 80 (1987) ("The term *property* has been successively broadened to include all types of interests in land, stretching beyond fee title to include leaseholds, future interests, materialman's liens, contracts—in other words, all rights to use, dispose of, and enjoy dominion over property."); 29A C.J.S. *Eminent Domain* § 56 (2007) ("Generally, . . . eminent domain extends to every species of property . . . and to every variety and degree of interest therein, or at least extends to all private property [including] real estate [and] all kinds of personal property, and even intangible or incorporeal rights.").

473. *See, e.g.*, Kelo v. City of New London, 545 U.S. 469, 484–86, 489–90 (2005). For purposes of this Article, we do not attempt to resolve the eminent domain question.

474. 691 N.W.2d 116 (Neb. 2005).

475. *See id.* at 127; *see also* Duncan, *supra* note 71, at 795 ("Individual interests in water . . . must . . . be used consistently with the larger public good, which itself evolves over time to reflect changing public needs and values.").

476. *See* Michael C. Blumm & Lucus Ritchie, Lucas*'s Unlikely Legacy: The Rise of Background Principles as Categorical Takings Defenses*, 29 HARV. ENVTL. L. REV. 321, 323, 368 (2005).

477. 389 U.S. 121 (1967).

478. *See id.* at 126–27.

479. *Id.* at 126.

480. *See* Hage v. United States, 35 Fed. Cl. 147, 172–73, 180 (1996).

> Flowing water presents unique ownership issues because it is not amenable to absolute physical possession. Unlike real property, water is only rarely a fixed quantity in a fixed place. Nevertheless, the right to appropriate water can be a property right. *Amici* provides no reason within our constitutional tradition why water rights, which are as vital as land rights, should receive less protection. . . . This court holds that water rights are not "lesser" or "diminished" property rights unprotected by the Fifth Amendment. Water rights, like other property rights, are entitled to the full protection of the Constitution.[481]

The issue of whether the right to appropriate water is a property right was placed squarely before the claims court in *Tulare Lake Basin Water Storage District v. United States*.[482] The court awarded irrigators $26 million when the Bureau of Reclamation curtailed contract allowances from a state project that shared a coordinated pumping system with a reclamation project in the Sacramento-San Joaquin Delta.[483] Deliveries were restricted from 1992-1994 in order to provide flow for endangered species.[484] The *Tulare* court concluded, without much analysis, that the irrigators had legally protected property rights in water deliveries under California law and that a reduction in deliveries effectuated a per se taking.[485] Although there was "no dispute that [the supplier's] permits, and in turn plaintiffs' contract rights, are subject to the doctrines of reasonable use and public trust and to the tenets of state nuisance law," the court concluded that only the state Water Resources Control Board could modify the permit terms to reflect changing needs.[486] Because the Board had not done so during the period in question, the court declined to in essence modify the permit itself, stating that the laws "require a complex balancing of interests [and] an exercise of discretion for which this court is not suited and with which it is not charged."[487]

The *Tulare* opinion has been roundly criticized for, among other things, failing to analyze whether California water law or the relevant con-

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481. *Id.* at 172. The court concluded that, "[s]ubject to reasonable regulation, if plaintiffs' water rights have priority over defendant's rights, plaintiffs, as senior appropriators, have a right to utilize their total volume of water before defendant has any right to utilize their water rights [per] 43 U.S.C. § 661 (water rights vested under local law are protected)," and remanded the claim for an application of § 661 and Nevada water law. *See id.* at 172–73, 180.

482. 49 Fed. Cl. 313 (2001).

483. *See U.S. Owes Farmers $26 Million, Judge Rules*, L.A. TIMES, Jan. 14, 2004, at 8, *available at* 2004 WLNR 19791464.

484. *See Tulare Lake Basin*, 49 Fed. Cl. at 315–16.

485. *See id.* at 318 ("Thus, we see plaintiffs' contract rights in the water's use as superior to all competing interests. It is a property interest . . . . Turning then to the merits of plaintiffs' claim, we being by determining the nature of the taking alleged.")

486. *See id.* at 324.

487. *See id.* at 323–24.

tracts created a property right.[488] The opinion refused to recognize either the public trust doctrine or California's constitutional requirement that uses of water be both beneficial and reasonable as an inherent limitation on title.[489] California courts have consistently construed California law to mean that the state owns all of the water in the state, in a supervisory sense, and although water rights holders have the right to use water, they do not own the water and cannot waste it.[490] Once it had determined that a property right existed, the claims court jumped to the conclusion that the government regulation had effectuated a per se physical occupation of the water requiring compensation.[491] As Professor Brian Gray explained,

> [r]eluctant to delve into the nuances of the reasonable use and public trust doctrines, the Court of Federal Claims seized on [the Board's previous decision to grant the permit] as the conclusive definition of the water rights. . . . In essence, the court decided that an appropriator is legally entitled to engage in (and has property rights to) any conduct that is authorized by its water rights permit or license. This interpretation oversimplifies—and therefore misapprehends—the nature of California water rights.[492]

The claims court reached the opposite conclusion a few years later in *Klamath Irrigation District v. United States*.[493] There, summary judgment was granted to the United States on the grounds that any interest irrigators had in Reclamation water was contractual in nature, and not property.[494] Accordingly, the irrigators were left with only contract remedies when

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488. *See, e.g.*, David B. Anderson, *Water Rights as Property in* Tulare v. United States, 38 McGeorge L. Rev. 461, 462-64 (2007).

489. *See* Gray, *supra* note 159, at 9. The California Constitution provides, in pertinent part:

> [T]he general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare. The right to water or to the use or flow of water in or from any natural stream or water course in this State is and shall be limited to such water as shall be reasonably required for the beneficial use to be served, and such right does not and shall not extend to the waste or unreasonable use or unreasonable method of use or unreasonable method of diversion of water.

CAL. CONST. art. X, § 2. This provision encompasses both surface and groundwater resources. *See* Cent. & W. Basin Water Replenishment Dist. v. S. Cal., 135 Cal. Rptr. 2d 486, 495 (Cal. Ct. App. 2003).

490. *See, e.g.*, *Cent. & W. Basin*, 135 Cal. Rptr. 2d at 496. Although *Central & West Basin* construed Art. X, § 2 in the context of a groundwater dispute, the court's analysis seems to sweep broadly enough to encompass all waters, including surface waters. *See id.* at 496–97.

491. *See Tulare Lake Basin*, 49 Fed. Cl. at 318–19.

492. *See* Gray, *supra* note 159, at 9.

493. 67 Fed. Cl. 504 (2005). For a critique of the *Klamath* opinion, see Grant, *supra* note 130, at 1354–60.

494. *See* 67 Fed. Cl. at 527, 535–37, 540.

deliveries were curtailed to provide flows for endangered fish species.[495] The court explicitly criticized the *Tulare* opinion for failing to assess the underlying nature of the interest in question to discern whether the plaintiffs in fact possessed property rights: "*Tulare* appears to be wrong on some counts, incomplete in others and, distinguishable, at all events."[496]

Notably, the public trust doctrine in California forms a fundamental component of the water rights system as an inherent limitation on interests in water, the exercise of which is not a taking.[497] California law is distinct from most other western states, however, in that the California code has been construed as providing the Board with continuing jurisdiction over water permits to ensure continuing compliance with the public trust.[498] Few if any state boards or agencies have a parallel authority, but they are all charged with remaining vigilant against forfeiture or waste, and most are required to scrutinize new appropriations and transfers to ensure that the public interest is satisfied.[499]

The web metaphor, with its complementary patterning definition for takings property, vividly illustrates the wisdom of the *Klamath* opinion and the fallacy of *Tulare*. The webframe, representing the public trust doctrine, empowers the state, as trustee, to safeguard the public interest in water supplies and water-dependent resources. The appropriator, with a state-sanctioned interest in using the water, occupies one of the concentric strands radiating from the center of the web, and holds one of the spoke-like strands attaching the thing (the water) to the webframe—a durable, usufructuary right. But the exclusivity strand is compromised, and there is no discrete asset that can be routinely conveyed or disposed of however the appropriator wishes. Like competitors' interest in distributing the news, appropriators possess a right to preclude other appropriators from using water, as well as a procedural due process right against capricious government action, but this is not a full private property right entitled to compensation for a regulatory taking.[500]

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495. *See id.* at 532. The court subsequently held that the "sovereign acts doctrine" provided a complete defense to the irrigator's contract claims against the Bureau. *See* Klamath Irrigation Dist. v. United States, 75 Fed. Cl. 677, 695 (2007).

496. *See Klamath*, 67 Fed. Cl. at 538. The claims court reached a similar result in Casitas Municipal Water District v. United States, 76 Fed. Cl. 100, 106 (2007), where the same judge that decided *Tulare* concluded that, under Tahoe-Sierra Preservation Council, Inc. v. Tahoe Regional Planning Agency, 535 U.S. 302 (2002), "only the government's active hand in the redirection of a property's use may be treated as a per se taking."

497. *See* Benson, *supra* note 411, at 571–73.

498. *See* Nat'l Audubon Soc'y v. Superior Court, 658 P.2d 709, 730–31 (Cal. 1983).

499. *See* Grant, *supra* note 111, at 486 (reporting that only two of the western states fail to compel new appropriations to undergo a public interest review prior to permit issuance, while roughly half of the states allow transfers of existing appropriations without public interest review).

500. *See supra* Subpart IV.A.

B. Procedural Due Process Property

The patterning definition for due process property requires that a claimant possess "an entitlement having a monetary value that can be terminated only upon a finding that some specific condition has been satisfied."[501] Although a discrete, marketable asset is not necessary, a cognizable legal right to exclude others from interfering with a valuable interest—an entitlement with discernible boundaries—is required.[502]

Prior appropriation water rights that have vested by application to beneficial use have been accorded procedural due process. In *Sheep Mountain Cattle Co. v. Department of Ecology*,[503] the court construed a water right as property for due process purposes.[504] The court found that the state violated procedural due process by issuing a termination order without providing notice or a hearing to a water rights holder who had failed to show continuous beneficial use of the water.[505] Because the court set aside the termination order on due process grounds, it was unnecessary to consider whether a taking of private property had also occurred.[506] In a previous case, however, the Washington Supreme Court concluded that no taking had occurred when latent water rights reverted to the state by operation of state forfeiture laws.[507]

Other state courts have likewise concluded that procedural safeguards are required before cancellation of water rights occurs.[508] Prior appropriators have also been provided with due process in general stream adjudications that could adversely affect their interests.[509] Vested appropriation rights are cognizable legal interests in valuable property, subject to protection from interference by contravening users.[510] Thus, they qualify as legitimate, discernible entitlements for procedural due process purposes.[511]

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501. *See* Merrill, *supra* note 30, at 961.
502. *See supra* Subpart III.B.2.
503. 726 P.2d 55 (Wash. Ct. App. 1986).
504. *See id.* at 57.
505. *See id.*
506. *See id.*
507. Dep't of Ecology v. Abbott, 694 P.2d 1071, 1077 (Wash. 1985).
508. *See, e.g.*, Speer v. Stephenson, 102 P. 365, 371–73 (Idaho 1909) (finding that due process was satisfied by statute providing for the recording in the state engineer's office of a permit to appropriate water and requiring notice to be given to all persons shown to have an interest in the permit by the state engineer's records); Engelmann v. Westergard, 647 P.2d 385, 388–89 (Nev. 1982) (holding that a permittee's due process rights were not violated where he did not receive actual notice regarding cancellation of his permits but state engineer advised permittee by certified letter, which was later returned "unclaimed").
509. *See, e.g.*, *In re* Rights to the Use of the Gila River, 830 P.2d 442, 450 (Ariz. 1992).
510. *See* Dennis J. Herman, Note, *Sometimes There's Nothing Left to Give: The Justification for Denying Water Service to New Consumers to Control Growth*, 44 STAN. L. REV. 429, 461–63 (1992).
511. *See id.*

C. Common Law Property

The Nebraska Supreme Court's bold stance that "[a] right to appropriate surface water . . . is not an ownership of property"[512] is legally defensible as between an appropriator and the state in the regulatory takings context. However, neither the web metaphor nor the patterning definition justifies the dismissal of property-based claims for private interference.

An appropriator's interest in the continued use of available surface water *vis-à-vis* other water users is the very essence of the prior appropriation system.[513] As between users, a person holding a senior appropriative water right has an exclusive right to use a specified amount of available water for a specified purpose at a specified time and place.[514] Surely, then, a water right has some incidents of property that can and should be protected from interfering water users. The Restatement (Second) of Torts explains that "'legally protected interest' [(which must exist for conversion to occur)] denotes the existence of a property interest that the law will protect against destruction" or misappropriation.[515] Although usufructuary interests, depicted as an elemental strand within the web of interests, are non-exclusive and not irrevocable, they are robust enough to be considered a form of property for resolving disputes between users.[516] Absent property, parties are left with negligence, contract, or other types of liability claims, some of which may be far more difficult to prove and, in the end, may fail to provide a satisfactory remedy.[517]

Conversion, although rejected outright in *Spear T Ranch*,[518] seems an appropriate claim for an aggrieved water right holder. At common law, conversion offers a remedy for a property right holder against unlawful possession, impairment, or destruction of her property by another.[519] The *Spear T Ranch I* court recognized that "[t]ortious conversion is any distinct act of dominion wrongfully asserted over another's property in denial of or inconsistent with that person's rights."[520] Troubled by the usufructuary nature of surface water rights, the court concluded that, "[b]ecause Spear T does not have a property interest in its surface water appropriation and only has a right to use, it cannot state a claim for conversion or tres-

512. Spear T. Ranch, Inc. v. Knaub, 691 N.W.2d 116, 127 (Neb. 2005).
513. See James H. Davenport & Craig Bell, *Governmental Interference with the Use of Water: Do Unconstitutional "Takings" Occur?*, 9 U. DENV. WATER L. REV. 1, 33 (2005).
514. *See* Freyfogle, *supra* note 195, at 1541 ("[A] water right is . . . merely the right to continue a particular, existing pattern of water use . . . with a specific economic and social result").
515. RESTATEMENT (SECOND) OF TORTS § 927 cmt. a. (1979); *see also supra* Subpart III.B.3 (providing elements of common law conversion property).
516. *See* Fig. 1, *supra*.
517. *See* Kaplow & Shavell, *supra* note 71, at 715–16. ; *supra* notes 70-72 and accompanying text
518. *See* Spear T. Ranch, Inc. v. Knaub, 691 N.W.2d 116, 126–27 (Neb. 2005).
519. *See* RESTATEMENT (SECOND) OF TORTS § 927 cmt. a.
520. *Spear T Ranch I*, 691 N.W.2d at 126–27.

pass."[521] But the requisite legally protected interest is present—the water right holder's ability to divert and beneficially use a certain amount of water for a specified purpose, before and instead of other water users in a system.[522] The conclusion that Spear T had no common law property in its water right[523] undermines the very basis of the prior appropriation system—the ability to assert a water right against another would-be water user. Using Merrill's patterning definitions and the web as a metaphor to conceptualize property interests in water helps to avoid this drastic outcome and, in turn, promotes an equitable and realistic view of the prior appropriation system that comports with rule of law objectives of consistency and coherence.

CONCLUSION

Whether something is treated as property has significant on-the-ground effects and marked legal consequences. Water is no exception. Overappropriation has become an intractable problem in many western watersheds. This is not surprising, given that the basic premise of western water law is to maximize use by leaving no drop behind.[524] By perpetuating the myth of unfettered private property rights in water, prior appropriation has caused rapid depletion of the resource and, in some cases, the collapse of entire riparian communities.[525] Meanwhile, water rights holders are penalized for conservation and motivated to use as much water as possible.[526] Governments have been loath to encourage innovation by revising the appropriative system[527] and are equally reluctant to impose restrictions that protect ecological interests for fear of regulatory takings claims.[528]

Understanding private and public rights in water can lead to a more nuanced understanding of the nature of property as a legal norm. Property has a complex history, laced with metaphor but sparse on bright line definitions. The result has been confusion over what should be considered property, with differing interpretations and contradictory results in courts at every level. Using Merrill's patterning definitions and a new metaphor

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521. *Id.* at 127.

522. *See, e.g.*, S. Tex. Water Co. v. Bieri, 247 S.W.2d 268, 271–73 (Tex. 1952) (finding that an irrigation company was not entitled to collect on a lien it had placed on the plaintiff's crop under a theory of conversion, where the company failed to show that it had any lawful right to use, control, or possess water used by the plaintiff, which had been taken from drainage ditches outside the company's permit area).

523. *See Spear T Ranch I*, 691 N.W.2d at 127.

524. *See* Freyfogle, *Common Wealth*, *supra* note 18, at 28; Neuman, *supra* note 111, at 975.

525. *See* Freyfogle, *Common Wealth*, *supra* note 18, at 40, 50 ("Far from being efficient in free-market economic terms, prior appropriation is highly wasteful.").

526. *See* Neuman, *supra* note 111, at 976–77.

527. *See id.* at 987–88.

528. *See* J. Peter Byrne, *Ten Arguments for the Abolition of the Regulatory Takings Doctrine*, 22 ECOLOGY L.Q. 89, 90–91 (1995).

for property—the web of interests—helps to order and apply coherent rules to property-based disputes over water and other things. Merrill's nested test, requiring an irrevocable interest in exclusive possession and use of discrete marketable assets for the strongest form of property, enables us both to discern constitutionally protected property for regulatory takings purposes and to identify more limited property interests for purposes of due process or common law claims. The patterning definitions, aided by the web of interests metaphor, provide a new way of conceptualizing property. Rather than a lifeless bundle of sticks—a disparate collection of separate rights or relationships—the web fixes the thing in question at the center of the dispute and draws our attention to the nature of the thing itself and the connections among actors with interests in that thing.

These two dynamic tools—the patterning definitions and the web metaphor—are most helpful for identifying property on the margins. Water rights, in particular, are unique because of strong public trust values and water's ephemeral, yet essential, nature. Viewing interests in water through the web demonstrates that a water right is a form of common law property as asserted against another water user but is not takings property as against the government wielding its regulatory powers on behalf of the public trust. The web metaphor explains this result by drawing our attention to public trust requirements, which form the all-encompassing webframe, and the innate physical limitations of water, portrayed at the center of the web itself. The web metaphor illustrates that private usufructuary interests must yield to collective interests of the public and the government acting on behalf of the public trust. The patterning definitions further clarify the nature of property in water. In most prior appropriation states, water users cannot claim exclusive possession and control of a discrete, marketable asset. This precludes water users from having takings property, but it does not preclude them from having due process or common law property.

In order for water users to execute water transfers, engage in water banking, conserve streamflows, or participate in a myriad of beneficial uses, it is important to have a clear characterization of which incidents of property inhere in a water right. Moreover, adequate remedies for real world disputes between users must be available for the legal system to function and to evolve in a fashion that promotes both stability and the full range of values associated with water. The web of interests metaphor, coupled with complementary patterning definitions of property, provides a powerful heuristic tool for resolving disputes over water and other things at the margins of property law.